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ABSTRACT

Environmental stress-challenge programs for delinquent youths as an alternative to the juvenile justice system in the US have shown very favorable results, though little research has been done to determine why. In order to provide information about processes involved in such programs, a checklist of 40 affective role expectations for delinquent youth was mailed to 58 program directors; checklists were returned by 49 directors and 48 instructors from 27 states, along with personal, professional, and program data. Results showed that Outward Bound greatly influenced the design of these programs; few had made adaptations to better serve special needs of delinquent youths. As for staff, few instructors had received outdoor education or training during their college education and there was high turnover. Directors had more stable positions and more formal education directly related to their profession. The Taxonomy of Affective Role Expectations was proven to be a valid representation of real phenomena, implying that many expressed goals of individuals and programs in this field were not realistic. Differences related to length of program, percentages of delinquent youths in a program, age of delinquents, and follow-up programs were noted, and recommendations for program development and future research are included. (BS)

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AFFECTIVE ROLE EXPECTATIONS FOR DELINQUENT YOUTH IN ENVIRONMENTAL STRESS-CHALLENGE PROGRAMS

by

Theodore F. Wichmann

B.S. in Education, University of Missouri, 1967

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CHAPTER I

INTRODUCTION

Education, in its broadest sense, has been traditionally charged with the development of intellectual, moral, and emotional maturity at a rate commensurate with that of physiological development. However, the rapid progression of techno-economic development in our society through the industrial, atomic and space ages has produced at least the symptoms of social schizophrenia, and has affected our educational systems. In fact, many critics claim that the standard education process actually delays entrance into adult society beyond the time when a full physical and sexual maturity has been achieved.[1] Furthermore, although man has more information concerning the natural environment than ever before, he is becoming increasingly alienated from nature.[2] Thus, today's adolescent is restricted for many years to a teenage limbo. He does not know when or how he will enter adulthood, he has little of no natural or cultural heritage to sustain him, and he possesses only superficial knowledge of the highly technological

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[1]Lee A. Maynard, "Nature as a Teacher," Saturday Review 52 (May 1969): 76-77.

[2]Everett M. Hafner, "The Challenge of Environmental Education," Science Education 56 (1972): 1-3.

machines and systems pervading his life-style.

These factors no doubt contribute to juvenile delinquency in our society. Today this problem of juvenile delinquency, like heart disease and cancer, is not limited to one socio-economic group or stratum, and is increasing rapidly in magnitude. For both of these reasons it is no longer feasible or socially desirable to incarcerate all juvenile delinquents. Thus there is increasing concern for the development of alternatives to incarceration both within and without traditional educational and social agencies.

Environmental stress-challenge programs have recently received some attention as one type of alternative to incarceration.[1] This type of program is still in its embryonic stages and borrows from several educational and correctional models including Outward Bound, experiential education, outdoor and environmental education, counseling and therapy, and crisis intervention and advocacy. Thus, programming is not standardized and even the general descriptive name varies greatly including adventure programming, wilderness adventure training, survival training, Outward Bound adaptive programs, and outdoor experiential education.

Rapid innovation in this area has caused obvious problems for funding agencies in terms of program development and evaluation. In 1973 the National Advisory Commission on Criminal Justice stated that:

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[1]Joseph J. Nold and Mary Wilpers, "Wilderness Adventure Training as an Alternative to Incarceration," in A Nation Without Prisons, ed. Calvert R. Dodge (Lexington, Mass.: D.C. Heath and Company, 1975).

> Most of these innovations have far outstripped interpretive research. Thus, for example, the last decade has seen a focus on various forms of community-based corrections. These programs have been generated pragmatically, usually with little or no reference to theory or experience. To this day, neither the concepts nor the method to evaluate or develop these programs with research support has been found. Many are expensive and elaborate; they cannot survive without proof of their effectiveness, which is impossible to demonstrate at a moments' notice... Such a process consists of a cycle in which review of the state of the art and development of research in relevant sciences are considered together so that specific areas for concentration in future research can be defined. This process never has been applied to correctional research strategy.[1]

This study utilizes a review of the development of research in the social sciences, especially attitude measurement and role theory, as well as a survey of certain specific processes involved in environmental stress-challenge programs for delinquent youth in order to clarify relevant concepts necessary for evaluation and future research.

Statement of the Problem

"Affective Role Expectations for Delinquent Youth in Environmental Stress-Challenge Programs" is a normative survey which investigates the following research hypotheses:

1. Response to the checklist will provide evidence to support the a priori categorization of affective role expectations into a taxonomy that is both unidimensional and cumulative

2. There is consensus between program directors and instructors concerning their affective role expectations for delinquent youth

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[1]U. S., National Advisory Commission on Criminal Justice, National Advisory Commission on Criminal Justice Standards and Goals, January 23, 1973, pp. 532-33.

3. Relationships exist between certain professional variables and the affective role expectations indicated by respondents

4. Relationships exist between certain program variables and the affective role expectations indicated by respondents

Significance of the Study

There are now more than 250 environmental stress-challenge programs, often called Outward Bound adaptive programs, in the United States. At least fifty-eight of these accept delinquent youth as participants. As with any progressive educational movement there are many cynics who have questioned the effectiveness and efficiency of these programs. This question has been recently explored through the use of a number and variety of tests, from attitudinal scales to achievement, skills, and even reading tests. Almost all test results have been favorable. Hard data have also been gathered, most of which is in the form of recidivism rates for adjudicated juvenile delinquents. However, little research has been done into why such programs are successful. Many researchers and experts in the field have noted the need for such studies. Richard Katz and David Kolb who were involved as participant observers in the well-known Kelly and Baer study wrote in the conclusion of their report:

> There should be further articulation of the Outward Bound methods and principles of education. As the demand for new types of Outward Bound programs continue there must be some guidelines for developing these programs...[1]

Joseph J. Nold, well-known authority and director of Colorado

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[1]Richard Katz and David Kolb, Outward Bound and Education for Personal Growth (Andover, Mass.: Outward Bound, Inc., 1968), p. 169.

Outward Bound School, saw a definite need to study the relationship of Outward Bound activities to the learning process.[1] Thomas Yahraes, author of Underway: An Approach to Experiential Learning, also noted the urgent need for immediate clarification of objectives, methods and activities essential to the development of successful stress-challenge programs.[2]

Robert J. Pieh, Professor of Education, Queen's University, Kingston, Ontario, and twice-director of Minnesota Outward Bound School presented a persuasive rationale for such immediacy when he stated:

> The Outward Bound ideology is compelling, persuasive and facilitating. It can also be destructive and obstructive. It can cut deeply and not heal. The philosophy and articulation of ends and means must be understood beyond cliches. Otherwise, imitation, gimmickry and labels or crutches, not walking sticks, take over. When understanding vanishes in euphoria, any form of experiential learning becomes impossible because we limit our capacity for experience and for transfer.[3]

The literature is full of such pleas for reflection upon and qualification of the educational principles operative in environmental stress-challenge programs. There is a constant emphasis upon the fact that Outward Bound is not a panacea and does not work automatically. This investigation is significant in its attempt to help clarify when such programs are appropriate and efficient, and what processes

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[1]Joseph J. Nold, "Outward Bound Approaches to Alternative Schooling" (a preliminary paper, Colorado Outward Bound School, 1973), p. 21.

[2]Thomas R. Yahraes, "The Role of Underway in Developing Self-Awareness Among a Group of Adolescent Females," (M.S. Thesis, Southern Illinois University-C., 1974), p. 82.

[3]Robert J. Pieh, A Janus Report (Boone, North Carolina: Appalachian State University, 1974), p. 3.

are relevant to their success.

Besides contributing to the clarification of the theory related to environmental stress-challenge programs for delinquent youth, this study hopes to aid in the implementation of new programs, and increase the effectiveness of established programs through the following practical means:

1. A more definitive directory of environmental stress-challenge programs which accept delinquent youth as participants in order to facilitate communication and a sharing of ideas and resources, and to aid in future research

2. More concise and clarified definitions of the processes and goals relevant to environmental stress-challenge programs for delinquent youth to help educators from all fields to see beyond the obvious cliches

3. A checklist of program components to facilitate proposal writing, program designing, staff and student selection and training, and overall evaluation

4. A checklist of affective role expectations for participants, which directors and instructors agree upon as being realistic in order to provide guidelines for standardization, future experimentation, evaluation and research

5. An identification of independent program variables which significantly effect the affective role expectations for participants as perceived by directors and instructors in order to facilitate the development and evaluation of program objectives

Assumptions of the Study

The following assumptions were basic to this study:

1. Directors and instructors have definite expectations concerning the behavior and attitudes of delinquent youth who participate in their programs

2. Directors and instructors, under favorable conditions, will express their opinions willingly

3. There exists agreement between directors and instructors as to the expected behavior and attitudes of delinquent youth who participate in their programs

4. The role expectations held by directors and instructors for delinquent youth are based upon experience working in this field

5. The behavior and attitudes of delinquent youth while participating in such programs are influenced by the expectations held by the director and instructors

6. The role expectations held by directors and instructors for delinquent youth are related to program processes and objectives

7. There exists no clearly defined and nationally accepted set of affective role expectations for delinquent youth who participate in environmental stress-challenge programs

8. Environmental stress-challenge programs for delinquent youth are significant enough in number and impact to have an influence on the educational and correctional institutions of the United States

Delimitations of the Study

The parameters of this study were established through the following delimitations:

1. This study was delimited to environmental stress-challenge programs in the United States which accept delinquent youth as participants

2. This study was delimited to the affective role expectations of directors and instructors for delinquent youth who participate in environmental stress-challenge programs

3. These affective role expectations were delimited to behaviors and attitudes which delinquent youth demonstrate while participating in the program

4. The selection of items for the program components checklist and affective role expectations checklist was delimited to the existing body of literature directly related to such programs

5. Due to scarcity of funds, no follow-up mailing was made, and there was no provision for contacting non-respondents

Limitations of the Study

The primary limitations of this study were identified as follows:

1. Since participation in this study was voluntary, directors and instructors who chose to participate may hold role expectations which are different from those of the total population of directors and instructors

2. Since there was no complete list of environmental stress-challenge programs which accept delinquent youth, this study was limited to those programs whose correct mailing address could be obtained through various sources

3. The instrument used to measure affective role expectations was not standardized on any specific representation

4. Data concerning the affective role expectations were limited to the self-reported perceptions of such expectations indicated by directors and instructors who responded to the checklist

5. This study was limited to a static measurement of affective role expectations; it does not include a long term follow-up to determine change in expectations over a period of time

6. Since this study was a broad normative survey, strict controls over such relevant variables as the quality and extent of staff training or the typology of specific delinquent populations were limited

Definition of Terms

For the purpose of providing clarity in the interpretation of this study, certain terms used frequently are defined in this section. The definitions are not necessarily universal or traditional. These terms are defined operationally as follows:

1. Delinquent youth: adolescents who have demonstrated a tendency to engage in, or practive, conduct that is out of accord with accepted social or psychological behavior and/or the law.[1] This includes some youth who are emotionally disturbed, school drop-outs, and drug abusers, as well as those with criminal records.

2. Experiential education: education which emphasizes experience rather than behavior. Experience is used here, according to Gestalt-field theory, as an interactive event in which a person comes to see

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[1] Webster's Third New International Dictionary (1966) s.v. "Delinquency."

and feel the consequences of a course of action. Thus, it is the insight or thought process, rather than the action itself, which is most crucial.[1]

3. Outdoor education: all learning included in the curriculum in any subject matter area and at any grade level, which can best be learned outside the classroom.[2] This includes the concept "in and for the outdoors" which emphasizes learning skills and knowledge directly related to the outdoors, as well as studying academic subjects in the outdoors.[3]

4. Environmental education program: an educational program whose main purpose is to teach that man is an integral part of a system from which he cannot be separated.[4]

5. Acclimatization: an experiential environmental education program which utilizes "a sensory and conceptual approach to ecological involvement." The goal of this program is to acclimate and sensitize students to their environment. The approach attempts to subtlely direct students' attention and sensory perception toward the recognition of specific environmental phenomena and stimuli resulting in the conceptualization of ecological processes. The approach utilizes

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[1]Morris L. Bigge, Learning Theories for Teachers (New York: Harper & Row, Publishers, 1964), pp. 94-110.

[2]Lloyd B. Shar[illegible], SI-BO-GI Outdoor Education Center (Carbondale, Ill.: Outdoor Education Association, Inc., 1961), p. 10.

[3]Julian W. Smith, Reynold E. Carlson, Goerge W. Donaldson, and Hugh B. Masters, Outdoor Education (Englewood Cliffs: Prentice Hall, Inc., 1963), pp. 1-309.

[4]William B. Stapp, "The Concept of Environmental Education," American Biology Teacher 32 (January 1970): 14-15.

manipulation through accepted group process techniques, and total immersion in the environment. The products of Acclimatization include: "excitement, enthusiasm, dedication, innovation."[1]

6. Stress-challenge program: an experiential educational program which has adapted the original basic concepts of Outward Bound, including the placement of small groups in wilderness settings to encounter situations of physical and psychological stress often resulting in the increased self-actualization of the participants.

7. Self-actualization: "the ongoing actualization of potentials, capacities and talents, as fulfillment of mission, as a fuller knowledge of, and acceptance of, the person's own intrinsic nature, as an unceasing trend toward unity, integration or synergy within the person."[2]

8. Environmental stress-challenge program: an experiential educational program utilizing aspects of both environmental education and Outward Bound or the stress-challenge concept.

9. Role: a position that can be filled by a person and that carries with it expectations that are defined and sanctioned by significant social-environmental systems. These social-environmental systems include any organized whole that affects the role incumbent but over which the role incumbent has no direct control.[3]

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[1]Steve Van Matre, Acclimatization (Martinsville, Indiana: American Camping Association, 1972), pp. 7-12.

[2]Abraham H. Maslow, Toward a Psychology of Being (New York: Van Nostrand Reinhold Co., 1968), p.26.

[3]Ralph E. Anderson and Irl E. Carter, Human Behavior in the Social Environment: A Social Systems Approach (Chicago: Aldine Publishing Co., 1974), p. 164.

10. Role expectations: normative and prescriptive, functional aspects of social role which apply evaluative, attitudinal and behavioral standards to an incumbent of a social role. Role expectations can be separated into the following two practical categories: (1) expectations of the person who occupies the role; and (2) expectations that others hold for the role. These expectations both affect and are affected by interpersonal behavior.[1]

11. Affective objectives: "Objectives which emphasize a feeling tone, an emotion, or a degree of acceptance or rejection. Affective objectives vary from simple attention to selected phenomena to complex but internally consistent qualities of character and corscience... expressed as interests, attitudes, appreciations, values, and emotional sets or biases."[2]

12. Affective role expectations: those role expectations which apply standards directly related to affective objectives. These role expectations emphasize an emotion, or a degree of acceptance or rejection and refer to interests, aatitudes, appreciations, values, and emotional sets or biases.

Design of the Study

The design of this study is basically of the normative survey type, utilizing the checklist technique. This method of research attempts to quantitatively describe a condition or set of conditions in

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[1]Neal Gross, Ward E. Mason, and Alexander W. McEachern, Exploration in Role Analysis (New York: John Wiley and Sons, Inc., 1958), pp. 17-18.

[2]David R. Krathwohl, B. S. Bloom, and B. B. Mania, Taxonomy of Educational Objectives: The Classification of Educational Goals Handbok II: Affective Domain (New York: David McKay Company, Inc., 1964), p. 7.

order to systematically determine the status of an existing situation. This research design was chosen for the following reasons:

1. No other reliable source was found which would provide in depth information concerning the demographic data of staff or participants of environmental stress-challenge programs which accepted delinquent youth

2. No other source of data was found to provide definitive information concerning the design of such programs or nationwide trends in developments and adaptations

3. This design was most appropriate for surveying a widespread population of directors and instructors concerning their affective role expectations for delinquent youth

4. It was reasonable to assume that the respondents possessed the information requested and were sufficiently motivated to cooperate in answering the questions

After an extensive review of related literature a pilot survey was constructed and administered. This pilot survey was then refined to produce the final questionnaire which consisted of three parts: (1) program data; (2) personal and professional data; and (3) affective role expectations for delinquent youth. A preliminary survey was also conducted to determine which programs accepted delinquent youth and were willing to participate in this study. The final checklist was mailed to directors and instructors from fifty-eight programs in twenty-seven states. Data were keypunched on computer cards and analyzed via the following statistical procedures as

programmed by the Statistical Package for the Social Sciences:[1]

1. One way frequency distributions
2. Guttman scalogram analysis
3. Student's t test

A detailed description of the desing, instrumentation and methodology of this study can be found in Chapter III.

Organization of the Study

This thesis is composed of six chapters, a bibliography and appendices. Chapter I contains an introduction, the statement of the problem, significance, delimitations, limitations, basic assumptions, definitions of relevant terms and a general description of the study design. Chapter II reviews the literature related to Outward Bound and the stress-challenge concept, outdoor and environmental education, delinquent youth in environmental stress-challenge programs, and role expectations for the analysis of social systems. Chapter III desscribes in detail the design, instrumentation and methodology of the study. Chapter IV presents the personal and professional data of the respondents and data related to their programs. Chapter V presents the statistical analysis of the quantified data derived from the "Checklist of Affective Role Expectations for Delinquent Youth." The final chapter includes a summary of the study, conclusions derived from the findings, and recommendations for future program development, evaluation and research.

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[1]Norman H. Nie et al., SPSS: Statistical Package for the Social Sciences, Second Edition (New York: McGraw-Hill Company, 1975), pp. 181-539.

CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of this investigation is to identify some of the educational/rehabilitational processes operative in existing environmental stress-challenge programs for delinquent youth. In order to arrive at a realistic description of these processes, an instrument was designed to measure the affective role expectations held by program directors and instructors for delinquent youth. The assumption here is that these role expectations are inextricable from the operative educational/rehabilitational processes, and in fact, are symptomatic of the whole micro-social system or the program design plus staff attitudes and values. This study does not attempt to add to the theory of role but only to use role theory to examine a particular social structure through consensus of role expectations.

No research pertaining to the role of delinquent youth in environmental stress-challenge programs, or to educational/rehabilitational processes operative in environmental stress-challenge programs for delinquent youth was found. However, several related studies were discovered. These have to do with the success of Outward Bound or Outward Bound adaptive programs in improving self-concept and/or reducing the recidivism rates of adjudicated juvenile delinquents.

This review of related literature is divided into four sections: (1) Outward Bound and the stress-challenge concept, (2) outdoor and

environmental education, (3) studies of delinquent youth in environmental stress-challenge programs and (4) role expectations for analysis of social systems. There is a heavy emphasis upon the history of Outward Bound and the stress-challenge concept, and outdoor and environmental education. A basic understanding of the Outward Bound concept and its relationship to the broad spectrum of experiential education is relevant to the interpretation of this study.

Outward Bound and the Stress-Challenge Concept

William James in his essay, "The Moral Equivalent of War," observed that stress in war developed moral character, especially pride and dignity. He saw this as also being due in part to the interactions and interdependence of the members of the small military group. James saw an educational application of these observations. Nature, from which man had become alienated through the process of civilization, could provide the stress in a peacetime situation. A confrontation with nature in small groups would bring man's latent physical and psychological strengths and weaknesses to the surface. James believed that an educational program of this sort would satisfy man's primitive longing to belong to a common cause, and would foster order, discipline, physical fitness, responsibility, and a devotion to the natural environment.[1]

Dr. Kurt Hahn was the first to practice James' theory and appropriately it was during the Second World War. Hahn had been exiled from Nazi Germany in 1933 because of his uncompromising and

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[1]William James, Talks to Teachers on Psychology: And to Students on Some of Life's Ideals (London: Longsmans, Green, 1910), pp. 115-22.

outspoken political and educational ideas. In Germany Hahn had been the Headmaster of Salem School, a co-educational public boarding school, where he had nurtured many of the progressive educational theories which later led to the development of Outward Bound. In Great Britain, he continued his educational career by founding the Godonstoun School in Marayshire, where he was Headmaster until 1953. During World War II Gordonstoun moved to Wales where students participated in such activities as schooner voyages, Finland sledge expeditions and public services such as coastguarding and fire fighting.[1] While in Wales, Hahn developed the County Badge training scheme for Gordonstoun boys, which was formalized as the following "Fourfold Achievement Plan:"

1. Pass physical tests (swimming, running, etc.)
2. Undertake a project demanding study and reputable performance in art, craft or skill
3. Undertake an expedition requiring care in preparation and stamina in execution
4. Train for defined service to their fellows[2]

Captivated by this idea and seeing its potential for saving the lives of his young seamen in the Battle of the Atlantic, Laurence Holt of the Blue Funnel Steamship Lines financed the meager start of the first Outward Bound School at Aberdovey, Wales. In October, 1941, twenty-four boys, eight from Alfred Holt and Company, began the first course involving physical training, sailing and rowing, mountaineering, and sea and mountain rescue. Within a year, further financing became available and over 100 boys were being accepted in eleven courses

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[1]H. Rohrs and H. Tunstall-Behrens, eds., Kurt Hahn (London: Routledge and Kegan Paul, 1970), pp. xx-xxi.

[2]James M. Hogan, "The Establishment of the First Outward Bound School at Aberdovey, Merionethshire," in Kurt Hahn, eds. H. Rohrs and H. Tunstall-Behrens (London: Routledge and Kegan Paul, 1970), p. 64.

per year, each lasting twenty-eight days.[1]

In 1946, at Kurt Hahn's suggestion a group met at Trinity College, Cambridge, under Master George Trevelyan to found the Outward Bound Trust to which the school was given by Alfred Holt and Company. By 1968, six schools were established in Great Britain and twenty-five schools abroad. Activities at all the schools are similar to the "Fourfold Achievement Plan" with different emphasis depending upon the location and facilities. For example, Aberdovey emphasizes river canoeing on the Dart and Tamar Rivers. Each course is divided into watches (at sea schools) or patrols (at mountain schools) of ten to twelve boys. Team rivalry is encouraged but competition is discouraged. Rescue and lifesaving and community service are activities at all the schools. Halfway through a course a conference is held with staff and students to assess performance. At the end of the course each student writes an account of his or her experiences. Special expectations such as giving up smoking and drinking are presented as challenges, not as rules. Initiative, and spiritual and aesthetic inspiration are also part of all courses.[2]

In 1963, with the help of a government grant the first girls' school, Rhowniar, was started near Towyn. The girls' courses were similar to the boys' but with more comfortable facilities plus less emphasis upon endurance and more upon drama, dancing, and "home nursing." However, since 1963, further expansion in the United Kingdom was considered undesirable. Future energy and funds were to

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[1]Ibid., pp. 65-66.

[2]Sir Spencer Summers, "The Outward Bound Movement," in Kurt Hahn, eds. H. Rohrs and H. Tunstall-Behrens (London: Routledge and Kegan Paul, 1970), pp. 67-68.

be channeled into the following diversifications:

1. Rover courses (completely mobile)
2. Extension courses (post-graduate)
3. Apprentice courses (industrial training)
4. Athletic courses (physical training)
5. Mountain leadership courses (guide certification)
6. Executive courses (potential sponsors)
7. Mixed courses (co-educational)
8. City challenge courses (dramatic social services)[1]

During the 1950's American interest in Dr. Hahn's ideas centered mainly around support of his work in Europe with the formation of the Atlantic Foundation for the Education of the Free. However, in 1960, after much study, Professor H. W. Eldredge, Chairman of the Sociology Department of Dartmouth College; F. C. Froelicher, Headmaster of the Colorado Academy; C. A. Herter, Governor of Massachusetts; J. M. Kemper, Headmaster of Phillips Academy, Andover, Massachusetts; J. L. Miner III, President of Outward Bound, Inc.; and a handful of influential business men decided to start the first Outward Bound School in America. The Colorado Outward Bound School, located in the Rocky Mountains near Denver, ran its first course in the summer of 1961 under the directorship of William Chapman, writer and educator. Robert J. Pieh founded the Minnesota Outward Bound School and directed its first course the following summer. The U.S. office for Outward Bound, Inc. was established in Andover, Massachusetts in 1962 to co-ordinate efforts.[2]

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[1] Ibid., pp. 68-72.

[2] Joshua L. Miner, "Outward Bound in the USA," in Kurt Hahn, eds. H. Rohrs and H. Tunstall-Behrens (London: Routledge and Kegan Paul, 1970), pp. 198-200.

Since 1962, four other Outward Bound Schools and the Dartmouth Outward Bound Center have been started in the U.S. Each of the schools has a special skills emphasis depending upon the type of environment. Each school is listed below by location and is followed by the specific type of expedition skill:

1. Colorado--mountaineering and skiing
2. Minnesota--canoeing and skiing
3. Hurricane Island--seamanship and snowshoeing
4. North Carolina--mountainbackpacking and white water canoeing
5. Northwest--mountaineering and skiing
6. Texas--mountaineering, desert backpacking and river rafting
7. Dartmouth Center--cycling, canoeing and skiing[1]

The standard Outward Bound course varies in length from twenty-one to twenty-eight days. All schools accept males and females. Some courses use a base camp while others are totally mobile. All schools use the same basic curriculum design incorporating the following activities:

1. Working together in groups of eight to twelve
2. Participating in conditioning and skills training
3. Learning safety techniques required to cope with the specific environment
4. Serving as a local search and rescue unit available for public
5. Working on a person-to-person basis with their instructors

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[1] Outward Bound (Greenwich, Connecticut: Outward Bound, Inc., 1975).

6. Training in group effectiveness, teamwork and leadership

7. Planning and carrying out major expeditions

8. Experiencing solo, a period of wilderness solitude lasting up to three days and nights

9. Learning and taking part in rock climbing and rappelling

10. Performing service projects[1]

All Outward Bound Schools also offer the following special courses which vary in length from one to twenty-eight days: (1) Teacher Practica for educators interested in applying some aspects of Outward Bound to their own area of concern; (2) Managers' Courses used as a management development program by some businesses; (3) Leadership Skills Courses are for graduates interested in becoming instructors or directors; (4) Manpower Challenge Courses such as the one used by Aldoph Coors Company to train chronic unemployables and young executives simultaneously; (5) Seminars, including "A Day With Outward Bound," used to introduce concepts and practices on a short term participation basis; (6) Contract Courses developed for the special needs and goals of a specific organization such as a school system, a social agency or a business.[2]

There are at least 250 Outward Bound adaptive programs in the United States. Adaptive programs are those which have adapted the original Outward Bound concepts, including activities, methods, and philosophies, to suit their own situation, and fulfill their own special needs. Nearly all have accomplished this with the direct

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[1] Outward Bound: A Catalog (Reston, Va.: Outward Bound, Inc., n.d.), p. 1.

[2] Outward Bound (Reston, Va.: Outward Bound, Inc., n.d.), pp. 7-10.

help of Outward Bound in the form of consultation and staff training. It would be impossible and redundant to describe or list all adaptive programs. However, some realization of the extent to which the Outward Bound movement has affected education in this country is necessary. The organizations which have been most receptive to the Outward Bound philosophy are high schools, colleges and universities, businesses and social agencies. Examples of these types of organizations which have adapted the Outward Bound method are listed below under a brief description of the program's major function in that specific organization.

1. Improve student-staff relationships: Winston Churchill High School, Eugene, Oregon[1]

2. Develop school and class unity: Web-Bell Buckle School, Bell Buckle, Tennessee[2]

3. Promote conservation leadership: Sterling School, Craftsbury Common, Vermont[3]

4. Reduce racial tension and unrest: Senior Seminar, Denver East High School, Denver, Colorado[4]

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[1]Joseph R. Schulze, An Analysis of the Impact of Outward Bound on Twelve High Schools (Reston, Virginia: Outward Bound, Inc., 1971), p. 27.

[2]Ibid., p. 30.

[3]Ibid., p. 32.

[4]Gerald E. Elledge, East High School Senior Seminar 1973 Evaluation (Denver: Denver School Press, 1973).

5. Motivate underachievers and dropouts: Dare to Care Program, Adams City High School, Colorado[1]

6. Cross-discipline environmental education: Jefferson High School, Daly City, California[2]

7. Provide an alternative to traditional physical education: Project Adventure, Hamilton-Wenham Regional High School, Hamilton, Massachusetts[3]

8. Enrich the curriculum: Alternate Semester, Lincoln-Sudbury High School, Sudbury, Massachusetts[4]

9. Orientate college freshmen: Prescott College, Prescott, Arizona[5]

10. Train students for social service: Dartmouth College, Hanover, New Hampshire[6]

11. Provide human relations training for laborers and executives: Manpower Challenge Program, Adolph Coors Company, Colorado[7]

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[1]Adams County School District 14, "Final Report Title III--Dare to Care," Adams City, Colorado, 1970.

[2]Reno Taini, "Community Environmental Education Program," Daly City, California, 1974. (Mimeographed.)

[3]Karl Rohnke and Mary Smith, Adventure Curriculum: Physical Education (Beverly, Massachusetts: Wildscraft Printers, 1974).

[4]Lincoln-Sudbury High School, "A Report on Alternative Semester 1973-1974," Sudbury, Massachusetts, 1974. (Mimeographed.)

[5]Frederick W. Medrick, Outward Bound and Higher Education: A Rationale and Outline for College Development (Denver, Colorado: Colorado Outward Bound School, 1974), p. 8.

[6]Ibid.

[7]Outward Bound (Reston, Va.: Outward Bound, Inc., 1973), p. 9.

12. Develop a more aware and involved faculty: Teacher Practicum, School of Education, Colorado University[1]

13. Integrate experience with the academic curriculum, Mitchell High School Senior Seminar, Colorado Springs, Colorado[2]

14. Provide a multi-level experiential education community resource center: Underway, Southern Illinois University Outdoor Laboratory, Carbondale, Illinois[3]

15. Provide an alternative to incarceration within an existing correctional agency: Homeward Bound, Massachusetts Department of Youth Services[4]

16. Provide a contractual, multi-agency, alternative to incarceration: Wilderness School, East Hartford, Connecticut[5]

17. Serve as an orientation phase for a long range delinquency prevention and rehabilitation program: Partners, Inc., Denver, Colorado[6]

Both the importance of the Outward Bound movement in the United States as an exemplar for educational innovation, and its magnitude in

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[1]Glenn Hawks, "Evaluation of the Outward Bound Teachers' Practica," University of Massachusetts, 1970. (Mimeographed.)

[2]Garold A. Fornander, Report on Mitchell Senior Seminar 1973-1974 (Colorado Springs, Colorado: Colorado Outward Bound School, 1974).

[3]Thomas R. Yahraes, "The Role of Underway in Developing Self-Awareness Among A Group of Adolescent Females," (M.S. thesis, Southern Illinois University-C., 1974), p. 82.

[4]Herb C. Willman, Jr. and Ron Y. F. Chun, "Homeward Bound," Federal Probation, Sept., 1973, pp. 54-56.

[5]Joe Beckham, "Wilderness School: Staff Report," State of Connecticut, 1975, pp. 1-10. (Mimeographed.)

[6]Bernice Murphy and Dennis Stenson, Partners Bicycle Touring Program 1976 (Denver, Colorado: Partners Inc., 1976), p. 1-2.

terms of the number of students and the variety of programs suggests that Outward Bound will have a lasting effect upon the educational and social agencies of this country.

Outdoor and Environmental Education

While Outward Bound was developing as an educational movement in Great Britain and other countries, a variety of educational movements emerged in the United States. Three of these--environmental education, conservation education, and outdoor education--are related and partially overlap. A graphic representation of this relationship, the often used three-circle diagram, can be seen in Figure 1.[1]

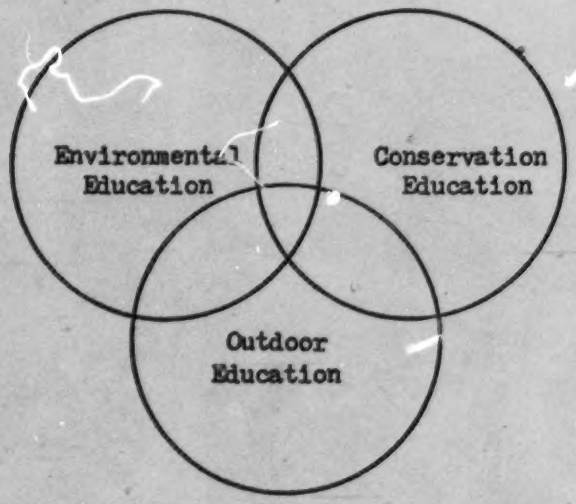

Figure 1. Overlapping Areas of Environmental, Conservation, and Outdoor Education

[1]Malcolm Swan, "Forerunners of Environmental Education," in What Makes Education Environmental?, eds. Noel McInnis and Don Albrecht (Louisville, Kentucky: Data Courier, Inc., 1975), pp. 4-20.

As Nowak recognized in 1971, Educators have often allowed themselves to develop a kind of parochialism which has hindered communication and development between the three areas represented in the diagram.[1] This same parochialism is no doubt the primary cause for the absence of Outward Bound from this diagram and from most of the literature pertaining to conservation, environmental and outdoor education. This does not mean that a degree of sharing has not occurred amongst all four areas. This section attempts to show a movement in each of these areas toward a more united and holistic approach, and to place Outward Bound and environmental stress-challenge programs within this broader spectrum of experiential learning.

L. B. Sharp is often considered the father of outdoor education due to his work with Life Camps, Inc., and the New York Board of Education in establishing one of the first long range outdoor education programs in the U.S. This program included all areas of the curriculum as well as "nature study."[2] L. B. Sharp is often quoted concerning the nature of outdoor education:

> That which can best be learned inside the classroom should be learned there; and that which can best be learned through direct experience outside the classroom, in contact with native materials and life situations should be there learned.[3]

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[1] Paul F. Nowak, "Editorial: Education In and About Our Environment," Journal of Outdoor Education 2 (1971): 6.

[2] The Board of Education of the City of New York, Extending Education through Camping (New York: Life Camps Inc., 1948), pp. 11-127.

[3] L. B. Sharp, "Basic Considerations in Outdoor Camping Education," The Bulletin of the National Association of Secondary School Principals XXI (May, 1947): 43-47.

Traditionally, outdoor education has been closely linked to the existing school curriculum. Smith, Carlson, Donaldson and Masters,[1] Freeberg and Taylor,[2] Hammerman and Hammerman,[3] Fitzpatrick,[4] among others, all saw outdoor education as an extension and enrichment of learning related to the school curriculum.

This limited view of outdoor education gradually began to expand to include subject matter not in school curriculu, and to place more emphasis on the affective domain. An indication of this trend toward a more holistic approach is the reference to the outdoor education process in the 1973 edition of Teaching in the Outdoors by Hammerman and Hammerman. In this edition, they re-define outdoor education as a precess of teaching which can be applied to conservation, outdoor recreation and environmental education.[5] Wiener, in attempting to examine and analyze the historical basis for outdoor education and to suggest a current rationale, took an even broader approach in stating that "the Uniqueness of the outdoors as a setting for learning experiences is basically an expression

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[1]Julian W. Smith, Reynold E. Carlson, George W. Donaldson, and Hugh B. Masters, Outdoor Education (Englewood Cliffs: Prentice Hall, Inc., 1963), pp. 1-309.

[2]William H. Freeberg and Loren E. Taylor, Programs in Outdoor Education (Minneapolis: Burgess Publishing Co., 1963), pp. 1-4.

[3]Donald R. Hammerman and William M. Hammerman, Teaching in the Outdoors (Minneapolis: Burgess Publishing Co., 1964), p. 8.

[4]Clinton N. Fitzpatrick, "Philosophy and Goals for Outdoor Education" (Ann Arbor, Michigan: University Microfilms, 1968).

[5]Donald R. Hammerman and William M. Hammerman, Teaching in the Outdoors Second Edition (Minneapolis: Burgess Publishing Co, 1973), pp. 5-9.

of the unity of the universe of which man is an integral part."[1]

Conservationism received much impetus from the work of Aldo Leopold. Before Leopold's land ethic concept, most conservation efforts were defended on aesthetic, religious or economic grounds.[2] Leopold based the land ethic on the premise that mankind shares the environment with all other forms of life and therefore shares the responsibility of amintaining it in the best interests of the total life community.[3] By 1935, this increased emphasis on conservation was felt in educational philosophy and was expressed by the National Education Association's Educational Policies Commission which stated that, "realization of the basic importance of these natural resources, determination to utilize them for the common good through long range planning, and general knowledge of appropriate remedial and preventive conservation procedures are among the marks of an educated citizen."[4]

The concepts related to conservation education, originally agrarian and rural in scope, evolved into broader, ecological concepts. Stapp and Yambert were both responsible in part for this change.

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[1]Morris Wiener, "Developing a Rationale for Outdoor Education," (Ph.D. dissertation, Michigan State University, 1968).

[2]Daryl C. Stuhr, "The Heritage of Environmentalism," The American Biology Teacher 2 (February, 1973): 68-76.

[3]Aldo Leopold, Sand County Almanac (New York, New York: Oxford University Press, Inc., 1949).

[4]Robert S. Funderburk, The History of Conservation Education in the United States (Nashville, Tenn.: George Peabody College for Teachers, 1948).

Stapp developed a comprehensive conservation program which emphasized the study of ecological characteristics and interrelationships as prerequisites to a study of conservation management and policy.[1] Yambert analyzed studies related to conservation teaching and developed a framework of twelve "predictive and descriptive generalizations" that went beyond the agrarian orientation indicative of previous conservation teaching.[2]

In spite of this ecological broadening of conservation education, the label "conservation" seemed to connote certain principles not widely accepted in education. In 1970, Schoenfeld stated:

> Environmental management is NOT simply contour plowing, whitetail deer management, and life cycles of plants. That is, it is not the narrow focus traditionally labeled conservation. Instead, environmental management is of the broadest scope in that it requires an understanding of man and his total relationship to his environment.[3]

Thus, "conservation education" gradually became "environmental education" and many proponents of the former painlessly became proponents of the latter. In fact, later that same year, Stapp wrote his often quoted concept of environmental education which states:

> The major objectives of environmental education are to help individuals acquire a clear understanding that man is an inseparable part of a system, consisting of man, culture, and the biophysical environment and that man has the ability to alter the interrelationships of this system. The principal feature of the

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[1]William B. Stapp, Integrating Conservation and Outdoor Education Into the Curriculum (K-12) (Minneapolis: Burgess Publishing Co., 1965), pp. 1-6.

[2]Paul A. Yambert, "A Principle and Concept Perspective of Conservation," (Ph.D. dissertation, University of Michigan, Ann Arbor, 1960).

[3]Clay Schoenfeld, "Toward a National Strategy for Environmental Education," The Journal of Educational Research, LXIV (September, 1970), p. 9.

philosophy of environmental education is the fact that man is an integral part of a system from which he cannot be separated.[1]

Environmental and conservation education expanded not only to include more universal principles and concepts, but also to place more emphasis upon the affective as well as the cognitive domain. Howell concludes in his review of literature related to conservation and environmental education that "a change in attitudes should be the objective of an educational program in environmental protection."[2] Gustafson states that environmental education, like the environment itself, is "all-of-one-piece" education.[3] Knapp,[4] Hanselman,[5] and Roth and Helgeson[6] all contributed to the development and evaluation of attitudes in environmental education.

The thinking of these environmental educators is not far removed from that of William James and Kurt Hahn who believed that modern man has become alienated from nature but that through a confrontation

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[1]William B. Stapp, "The Concept of Environmental Education," American Biology Teacher 32 (January 1970): 14-15.

[2]David L. Howell, "The Effect of a Student Manual on the Attitudes of High School Students Toward Environmental Protection," (Ph.D. dissertation, Ohio State University, 1973), p. 11.

[3]J. A. Gustafson, "Editorial," Nature Study 4 (Winter, 1972-73).

[4]Clifford E. Knapp, "Attitudes and Values in Environmental Education," The Journal of Environmental Education III (Summer 1972), p. 28.

[5]David L. Hanselman, Interdepartmental Teaching of Conservation at The Ohio State University (Columbus, Ohio: The Ohio State University 1967).

[6]Robert E. Roth and Stanley Helgeson, A Review of Research Related to Environmental Education (Columbus, Ohio: ERIC Science, Math and Environmental Education Information Analysis Center, 1971).

with nature on her terms man can reaffirm his roots and become more one with the environment. Two environmental education approaches which are very similar to Outward Bound in objectives and methods and which Outward Bound uses, either consciously or unconsciously, in thier courses are the NEED (National Environmental Education Development) Program and Acclimatization. The NEED Program is a process developed by the National Park Service to improve students' environmental awareness, understanding and values. NEED's primary goal is to assist a person in:

> ...coming to grips with his own world by way of a valid environmental ethic. Such an ethic must be based on understanding of the earth's stystems and how they operate. It must grow out of a personal desire to participate in the total life process of the planet.[1]

"Acclimatization" originated at Towering Pines Camp, Eagle River, Wisconsin in 1972. Acclimatization activities send students into mud and bog, under the water and up into trees, getting them to totally experience the natural environment by becoming one with it. Van Matre says of this innovative approach:

> Acclimatization does not depend on trained ecologists. It's more a state of mind than a list of prescriptions. It's attitudinal rahter than dogmatic. We must help the young develop a feeling of identity with their environment.[2]

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[1] U.S., Department of Interior, National Park Service, National Environmental Education Development Program, n.d.

[2] Steve Van Matre, Acclimatization (Martinsville, Indiana: American Camping Association, 1972), pp. 7-12.

In conclusion, it appears that these three fields, outdoor education, conservation/environmental education and the Outward Bound movement, are more alike than different. Similarities that might be drawn are:

1. All are educational developments occurring in the past forty years

2. All occur primarily in the out-of-doors

3. All are primarily experientially oriented

4. All are holistic in their approach and are concerned with attitudes as well as knowledge

The title of the annual conference co-sponsored by Outward Bound--"Conference on Experiential Education/Learning"--may be at least a symbolic plea for further cooperation between these three fields to facilitate the sharing of information and ideas and contribute to the progress of the state of the art.

Finally, a modification of the diagram in Figure 1 is suggested as a more dynamic model which also places Outward Bound or the environmental stress-challenge movement in the perspective of vital outdoor, experiential education processes. See Figures 2 and 3, pp. 33.

Studies of Delinquent Youth in Environmental Stress-Challenge Programs

Presently, there is a paucity of research related to delinquent youth in environmental stress-challenge programs. However, an extensive search of the literature revealed the studies described in this section. The definition of delinquent youth which set the parameters for this review, is the same used throughout this study and includes such categories as emotionally disturbed, mental patients, school drop-outs

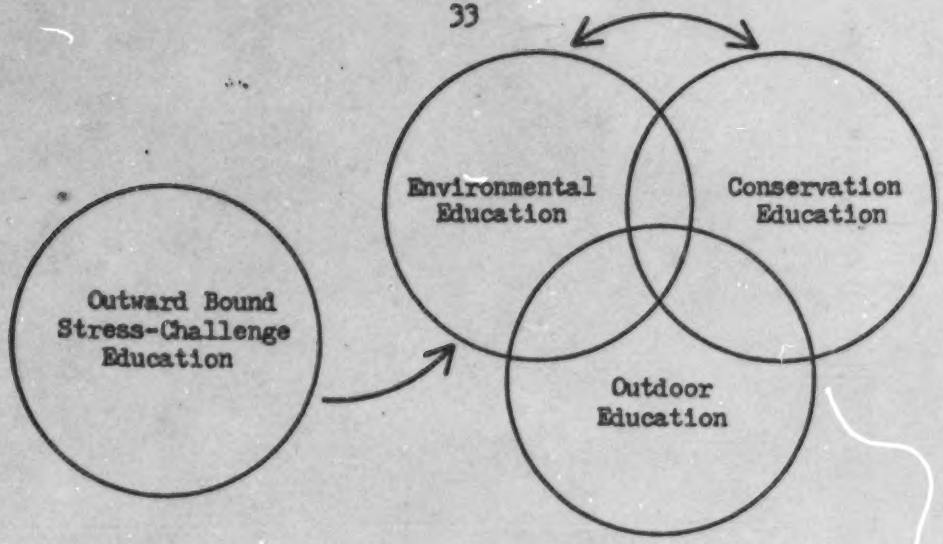

Figure 2. A Dynamic Model of Various Areas Within Experiential Education

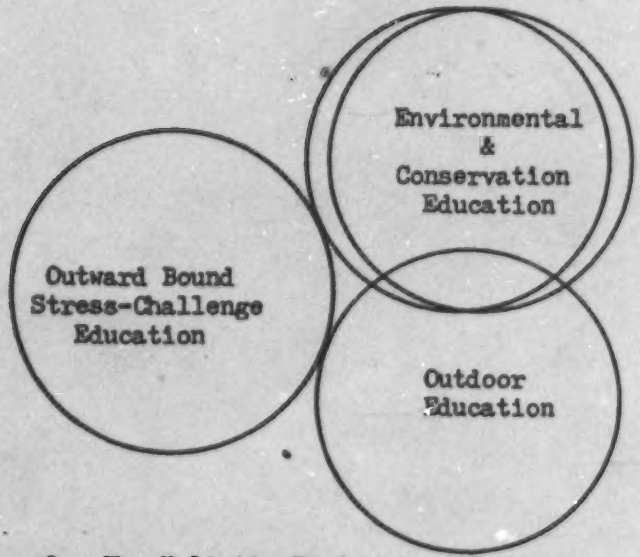

Figure 3. The Holistic Tendencies of Various Areas Within Experiential Education

and drug abusers as well as those with criminal records. The primary purpose of this section is to present background and a historical framework for this study and especially for the construction of the Affective Role Expectations Checklist for Delinquent Youth. No studies were found which investigated the role of delinquent youth in environmental stress-challenge programs, or educational/rehabilitational processes operative in such programs. An attempt was made to include only those studies which were relatively empirical.

Several studies were found which were related to utilization of the Outward Bound model to improve the self-concepts of underachievers and potential school drop-outs. Denver East High School became involved with Outward Bound in an attempt to reduce racial conflict and an increasing drop-out rate. They began their own Senior Seminar in 1969. It was run entirely off-campus in three week experiential modules. In 1970, the drop-out rate for participants was 2.2% compared to 11.5% for the remainder of the senior class. The school-wide drop-out rate was reduced from 23.7% in 1969 to 13.3% in 1973. Racial riots ceased.[1]

Schroeder and Lee of Princeton University tested the effects of Outward Bound on a group of underprivileged inner-city youths from Trenton, New Jersey. The youths were characterized as low achievers and potential drop-outs who were alienated from society. It was found that the Outward Bound group showed significant change in attitude as compared to a control group. The Outward Bound group saw themselves

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[1]Elledge, Denver East, p. 25.

as more active, stronger and less alienated, and viewed peers and authority figures as less threatening. They also showed a more mature goal-orientation and greater flexibility of means of goal-achievement.[1]

Naches and Roberts, professional psychologists on the staff of Adams County School District No. 14 in Colorado, evaluated the effect of the "Dare to Care" program on high school students. Using the High School Personality Questionnaire, a Student Attitude Survey, and a Staff Rating Scale with three groups of students, "top students, volunteers, and potential drop-outs," they concluded that all students became more outgoing, affected by feelings, assertive, tender-minded, and self-controlled. They also concluded that these changes were most significant for the students categorized as "potential drop-outs."[2] Stimpson and Pederson in a study of under-achieving high school students concluded that evaluation of all self-concepts was favorable following a survival training experience, and there were significant increases in participants' positive attitudes toward the concepts of "actual self," "mother," and "father."[3]

Manpower Challenge was developed in 1968 by the Adolph Coors Company and the Colorado Outward Bound School. It was designed as pre-job training for the hard-core unemployed. Between 1968 and

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[1]Harold M. Schroeder and Robert E. Lee, Effects of Outward Bound Training on Urban Youth (Trenton, N.J.: Action, Inc., 1967), p. 4.

[2]Adams County School District 14, "Final Report Title III--Dare to Care," Adams City, Colorado, 1970.

[3]D. V. Stimpson and D. M. Peterson, "Effects of a Survival Training Experience Upon Evaluation of Self and Others for Under-achieving High School Students," Perceptual and Motor Skills 71, 1970, pp. 377-78.

1971, 107 trainees and 23 supervisors went through a specially designed Outward Boudn course followed by a ninety-day work-counseling period, after which the trainees became full-time employees. By 1971, seventy-one percent of the trainees were still employed.[1]

Several studies which evaluated the effect of environmental stress-challenge programs adapted for therapeutic use with mental patients and emotionally disturbed youth were also discovered. Camp Woodland Springs, ninety miles east of Dallas, has been operating year round since 1946. Emotionally disturbed boys six to sixteen years of age live in the primitive wilderness setting of the camp for six months to three years. The boys cook their own meals, build thier own shelters and plan and execute raft trips to New Orleans, nine hundred miles away. Wilbur Brining of North Texas State University, personally interviewed boys who had attended the camp from 1946-1958. He also interviewed parents and teachers. All material gathered was used by a special committee which evaluated the post-camp adjustment. 70.8 percent of the boys studied fell into the top two classifications fo good to excellent post-camp adjustment.[2] Adams in studying a small sample of emotionally disturbed adolescents who participated in a survival training experience found that the

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[1]Colorado Outward Bound School, "Manpower Challenge" (Denver: Colorado Outward Bound School, 1971).

[2]Campbell Loughmiller, Wilderness Road (University of Texas: The Hogg Foundation for Mental Health, 1965), p. 31.

experience produced a significant, positive change in the self-concept of the individuals.[1]

Barcus and Bergeson in their comprehensive review of the survival training literature as pertaining to mental health, discuss Outward Bound and other similar programs. The authors make a distinction between "survival training" and the "adventure model." The latter de-emphasizes struggle and survival and emphasizes accomplishment and enjoyment. This distinction is especially important in therapeutic programming for mental patients.[2] In 1972 an adventure camp was conducted by Jerstad Adventures and Parbat Adventure Institute for the Oregon State Mental Hospital. Fifty-one patients, fifty-one staff and thirty-three guides participated. The patients, all volunteers, were chronically ill mental patients ranging in age from adolescent to elderly. None was excluded on the basis of either diagnostic categorization or physical condition. All types of diagnostic categories were represented. It was found that thirty-one of the fifty-one participants have been released from the hospital, including one who had been hospitalized for twenty-four years. While some released entered other kinds of supervised homes, others left with no further treatment.[3]

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[1] W. D. Adams, "Survival Training: Its Effects on the Self-Concept and Selected Personality Factors of Emotionally Disturbed Adolescents" (Ph.D. dissertation, Utah State University, 1969), p. 92.

[2] C. G. Barcus and R. G. Burgeson, "Survival Training and Mental Health: A Review," Therapeutic Recreation Journal 6 (1972): 3-7.

[3] Lute Jerstad and John Stelzer, "Adventure Experiences as Treatment for Residential Mental Patients," Therapeutic Recreation Journal, Third Quarter, 1973, pp. 8-11.

Most of the studies that were found concerned themselves with the positive affective growth of participants designated as "juvenile delinquents." Between 1965 and 1966, the Massachusetts Division of Youth Services sent 100 adjudicated juvenile delinquents to the Colorado, Minnesota and Hurricane Island Outward Bound Schools. An extensive research study by Baer and Kelly showed that after nine months only 20% of the Outward Bound group had re-appeared in court while the recidivism rate for a control group, who had gone through a ninety day training school program, was 42%.[1] In 1969, the Youth Authority began their own Outward Bound adaptive program based at a State Forestry Camp. The program, Homeward Bound, consists of Phase I, an orientation period at the Forestry Camp Homeplace, and Phase II which is spent mostly on the Appalachian Trail or at sea. A fourteen month follow-up study by Willman and Chun showed that 20.8% of the Homeward Bound group recidivated as opposed to 42.7% of the control group.[2]

Urban Bound, sponsored by the Juvenile Court of Denver in 1967-68, was a city-based program designed to follow up a wilderness adventure experience. After one year, twenty-one of the thirty-two juvenile delinquents participating had not appeared before the court again. Of the eleven who had recidivated, three were back in school, two held jobs, and one was relating more effectively. Only five

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[1] Francis J. Kelly and Daniel J. Baer, Outward Bound Schools as an Alternative to Institutionalization for Adolescent Boys (Boston, Massachusetts: Pandel Press, 1968), pp. 26-28.

[2] Herb C. Willman, Jr. and Ron Y. F. Chun, "Homeward Bound," Federal Probation, September, 1973, pp. 54-56.

showed little improvement. Thus, 85% had benefited positively from the program.[1]

From 1970-1971, Brigham Young University conducted a study to evaluate the effect of a 26-day wilderness expedition on the self-concepts of 82 students registered in Youth Leadership 480 (Outdoor Survival). Those tested included 32 male and 50 female students among whom were those without expressed problems, students on academic suspension, drug users, and juvenile delinquents. The counseling form of the Tennessee Self-Concept Scale was administered immediately before and after the expedition. On each of the eight sub-scales the change in level of esteem was positive to the .01 level of confidence as measured by the t-test. The self-evaluation made by each of the students and compiled as a group revealed a positive change in the overall level of self-esteem.[2]

Collingwood evaluated a three-week survival camping experience with inner city delinquents. He reported significant improvements in physical, intellectual, emotional and interpersonal behavior as rated by the participants' counselors and parents. The participants were "...able to leave the program not only with a sense of accomplishment, but with more effective behavior and attitudes relevant to rehabilitation."[3] The New York State Division for Youth found

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[1] Urban Bound (Denver: Colorado Outward Bound School, 1969).

[2] Clark T. Thorstenson and Richard A. Heaps, "Outdoor Survival and It's Implications for Rehabilitation," Therapeutic Recreation Journal, First Quarter, 1973, pp. 31-33.

[3] T. R. Collingwood, "Survival Camping with Problem Youth," Rehabilitation Record (May-June, 1972): 25.

that their co-ed Outward Bound adaptive program for delinquent youth, "Higher Horizons," fostered harmony in group living and working and increased sensitivity for the feelings of others. Fear and distrust were decreased through cooperation in facing dangers and discomfort, and self-confidence was increased through self-knowledge.[1] Freeman, Spilka and Mason conducted an evaluation of adjudicated delinquents who participated in a cooperative program with the Colorado Outward Bound School. The major hypothesis, that "the consequences of aggression would come to be negatively viewed," was accepted.[2]

In conducting this review of literature related to environmental stress-challenge programs for delinquent youth, the following research problems were noted which have significant implications for this present study:

1. Lack of sufficient information among academicians concerning these specialized programs

2. Lack of exchange and standardization between programs

3. Difficulty in relating hard data such as drop-out and recidivism rates to program processes

4. Lack of appropriate measurement instruments

5. Concern for the special needs of delinquent populations

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[1]William L. Rhode, "New York State Division for Youth Tests Higher Horizons Program," American Journal of Correction (March-April, 1973): 39.

[2]Robert Godfrey, "A Review of Research and Evaluation Literature on Outward Bound and Related Educational Programs," paper presented at the Conference on Experiential Education, Estes Park, Colorado, 8 October 1974.

Role Expectations for Analysis of Social Systems

Although it is not the primary purpose of this study to contribute to theory related to role, social systems, nor educational psychology, a basic theoretical framework and rationale is essential for its interpretation. The purpose of this section is to outline and document such a framework. This section reviews selected literature related to the theoretical rationale and the social systems model utilized in the present research design.

Certainly such theoretical approaches as Freud's psychosocial approach to human behavior or B. F. Skinner's behavioral theory can and have been used in studying educational systems. However, it was felt that Piaget's cognitive theory was more appropriate as a basis for this study which deals with the role expectations and the educational/social system (i.e., Outward Bound or the environmental stress-challenge concept) immediately surrounding the delinquent youth, rather than the behavior of the delinquent himself. Furthermore, Piaget's emphasis on first-hand involvement, experience, and grappling with problems appropriate to the person's intellectual development are consistent with the philosophy of Dr. Kurt Hahn and Outward Bound.

Piaget believes that thought structures are patterns of internalized actions, ranging from the most elementary reflex pattern to profound philosophical thought. "Schemata" are organized action sequences and behavior patterns. Thought is nothing more than such actions and schemata, refined and modified endlessly by intelligence.

Piaget furthers this by stressing that reality as we know it can only be this structure of associated and coordinated experiences. In other words, reality is structured by the schemata we have developed.[1]

There are two fundamental characteristics of schemata--"organization and adaptation." Every act is organized and the dynamic aspect of organization is adaptation. Likewise, adaptation takes two forms--"assimilation" and "accommodation." Assimilation refers to the person's attempt to fit new experience into the old schemata. Accommodation refers to the person's modification of his old schemata to incorporate the new experience. There is always a balance of these two processes.[2]

This theory of Piaget presents a basis for the relevancy of social systems theory and role theory. A person's set of role expectations for himself or others, is a schema. Thus role expectations not only develop from experience, but also tend to determine or structure experience. The "reality" of any social system is in turn structured by such schemata. This reality is dynamic. A person assimilates new experiences into old role expectations, and modifies his role expectations to fit new experiences.

This is not to imply that Piaget was the only one concerned with this two-way interaction between man's perceptions and "reality." The "mediating processes" of Hebb and others is roughly equivalent

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[1]John L. Phillips, Jr., The Origins of Intellect: Piaget's Theory (San Francisco: W. H. Freeman, 1969), p. 9.

[2]Ibid., p. 7.

to Piaget's schemata.[1] Nord also discusses this interaction in defining perception. He sees perception as "the process by which an individual gives meaning to his environment," and concludes that "recognition of the active role of the perceiver is important for the student and practitioner of organizational behavior."[2]

Nord developed a model of interpersonal perception which is reproduced in Figure 4, page 44. This model summarizes the interaction of variables in interpersonal perception by describing an interaction between two individuals, named "Person" and "Other." The two lower circles in the diagram represent the inner worlds of each party; and the upper part of the figure represents the context and interaction as they "really are" (i.e., objective reality). Arrows numbered 1 represent the influence of conscious and nonconscious elements on each other. Arrows 2, 3 and 4 show different levels of interaction on which the behavior and internal states of one party may be changed by the behavior of the other. Arrows numbered 5 represent the interaction between each individual and reality. It is important to note that all arrows are "two-way." Nord also states that the behavior of the participants is part of the "real situation."[3]

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[1]D. O. Hebb, "The Mammal and His Environment," American Journal of Psychiatry III (1955): 826-31.

[2]Walter R. Nord, Concepts and Controversy in Organizational Behavior (Pacific Palisades, California: Goodyear Publishing Co., Inc., 1972), p. 19.

[3]Ibid., pp. 20-23.

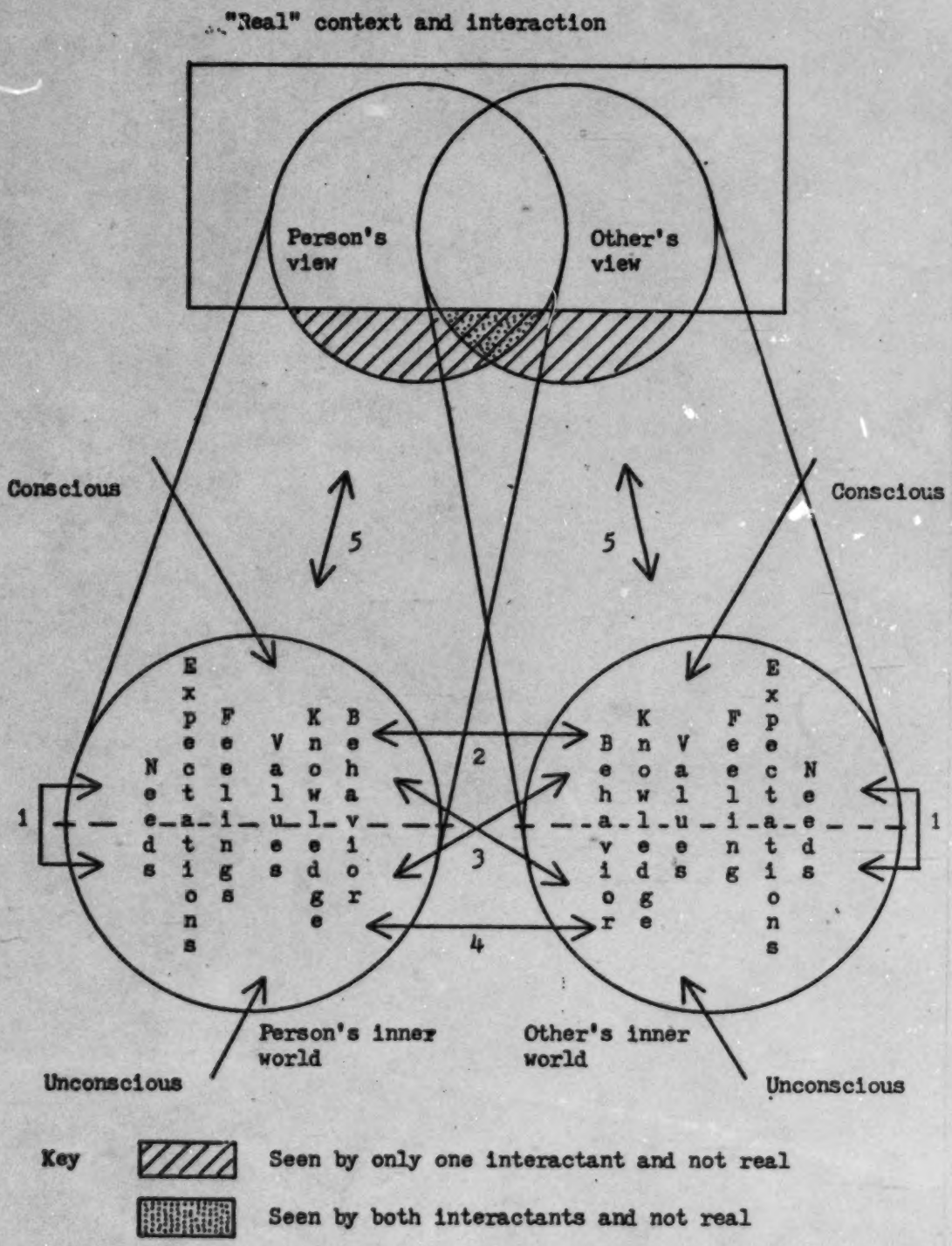

Figure 4. Nord's Model of Interpersonal Perception

Furthermore, Phillips notes that "there is probably no prominent psychologist today who does not explicitly recognize the importance of "mediating processes."[1]

This theory is the basis for the development of a social systems model appropriate for the investigation of role expectations for delinquent youth in environmental stress-challenge programs. Anderson and Carter broadly define a system as "an organized whole made up of components that interact in a way distinct from their interaction with other entities, and which endures over some period of time."[2] They also state that social systems exist at all "levels" from individuals to cultures and societies.[3] The problem is defining the basic unit of a social system.

The macrofunctionalists such as Talcott Parsons view the totalistic system, society, as the prime focus and view the behavior of individuals as being determined by the total system's needs and goals.[4] At the other end, social behaviorists such as Blumer, emphasize individual behavior and see society as being constructed out of clusters of behavior patterns and role consensus.[5]

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[1]John L. Phillips, The Origins of Intellect, p. 6.

[2]Ralph E. Anderson and Irl E. Carter, Human Behavior in the Social Environment: A Social Systems Approach (Chicago: Aldine Publishing Co., 1974), p. 164.

[3]Ibid., p. 8.

[4]Talcott Parsons, The Social System (Glencoe, Illinois: The Free Press, 1951), pp. 24-30.

[5]Herbert Blumer, "Society as Symbolic Interaction," in Symbolic Interaction, eds. Jerome G. Manis and B. N. Meltzer (Boston: Allyn and Bacon, 1967), pp. 139-48.

Koestler, however, coined the phrase "holon" to express the idea that each entity is simultaneously part and whole.[1] Anderson and Carter extend the idea of holon to include the following corollaries:

1. The focal system which is the system of primary focus

2. The subsystems which consist of component parts of the focal system

3. The suprasystems of which the focal system is a part, or to which it is related.[2]

This model allows the researcher to approach a subject, such as the role of delinquent youth in environmental stress-challenge programs, from both the atomistic and wholistic points of view. In this case, the focal system is the role of delinquent youth in environmental stress-challenge programs.

The subsystems are those components or parts which in fact determine this "role." Gross, Mason and McEachern who saw the analysis of role as essential to any study involving social behavior, developed three functional aspects of social role:

1. Expectations of the person who occupied the role

2. Expectations that others held for the role

3. The social structure which surrounds the role[3]

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[1]Arthur Koestler, and J. R. Smythies, Beyond Reductionism: New Perspectives in the Life Sciences (Boston: Beacon, 1971).

[2]Anderson and Carter, Human Behavior, pp. 8-10.

[3]Neal Gross, Ward E. Mason, and Alexander W. McEachern, Explorations in Role Analysis (New York: John Wiley and Sons, Inc., 1958), pp. 17-18.

Two of these "functional aspects" will serve as subsystems in this study. These are the social structure and expectations surrounding the role of the delinquent youth in environmental stress-challenge programs. The social structure is that of the program design. The role expectations are those held by program directors and instructors.

The suprasystem is the total Outward Bound or environmental stress-challenge, educational process or model. Ultimately, it is the relevancy of the findings of this study to the functioning of the suprasystem that will determine the significance of this work.

CHAPTER III

DESIGN, INSTRUMENTATION AND METHODOLOGY

The primary objective of this study was to provide information concerning the processes involved in environmental stress-challenge programs for delinquent youth in the United States. A search of literature related to sociology and educational psychology revealed that the measurement of perceived role expectations was a feasible means of analyzing social-educational systems. An instrument was constructed to measure affective role expectations held by directors and instructors for delinquent youth participating in their programs. The instrument was refined and distributed to programs accepting delinquent youth. Sources of raw data included: (1) program data; (2) personal and professional data of respondents; and (3) responses to the checklist of affective role expectations. The Statistical Package for the Social Sciences, SPSS, was utilized to analyze the data and test the statistical hypotheses. This chapter describes in detail the procedures used in selecting the subject population, developing the instrument, and collecting and analyzing the data.

Preliminary Procedures

Since no comprehensive list of environmental stress-challenge programs accepting delinquent youth existed, a preliminary survey was conducted preceding the distribution of the checklists in order

to determine the subject population. The original mailing list consisted of environmental stress-challenge programs in the U.S. which did not explicitly or implicitly exclude delinquent youth. The large majority of these programs operated as independent contracting agencies or were funded by a social agency. Sources for this original mailing list included the following:

1. A list of Outward Bound adaptive programs obtained from Kathy Delf of Outward Bound, Inc.

2. The "Participant Listings" from the 1974 Conference on Experienctial Education[1]

3. The "Address List of Participants" from the 1975 Urban and Wilderness Activity as Experiential Learning Conference[2]

4. Directory: Programs in Outdoor Adventure Activities[3]

5. An extensive survey of recent program literature

The director of each of these programs was mailed a cover letter explaining the purpose of the study with a self-addressed, stamped post card. A copy of the letter and the post card appear in Appendix A. The post card asked the following questions:

1. Do you accept "delinquent youth" into your program?

2. Will you take 20 minutes to mark a well constructed

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[1]Conference on Experiential Education, "Participant Listings," Estes Park, Colorado, 1975.(Mimeographed).

[2]Conference on Urban and Wilderness Activity as Experiential Learning, "Address List of Participants," Mankato State University, Mankato, Minnesota, 1975.

[3]Alan N. Hale, Directory: Programs in Outdoor Adventure Activities, (Mankato, Minn.: Outdoor Experiences, Inc., 1975.

checklist of role expectations for delinquent youth?

3. How many of your instructors might be willing to mark the checklist?

4. Would you like to receive a summary of this study?

In January 1976, preliminary survey cards were mailed to one hundred program directors. Table 1 contains the responses from seventy-five of the ninety-seven programs contacted. This represented a return of 77.3 percent to the initial contact. The analysis of the data supplied in the post card questionnaire revealed that fifty-eight of the programs contacted accepted delinquent youth into their programs. Directors and instructors from these fifty-eight programs constituted the subject population for this study.

TABLE 1

BASIC DATA CONCERNING THE PRELIMINARY SURVEY UTILIZED IN THE STUDY

Item	Count
Total number included in mailing	100
Insufficient or wrong address	3
Total number of responses	75
Did not respond to survey	22
Did not accept delinquent youth	17
Did accept delinquent youth	58
Director willing to mark checklist	58
One or more instructor willing to mark checklist	54
Desire to receive a summary of study	75

Instrumentation Procedures

A major step in this study was the preparation of a checklist of role expectations held by directors and instructors for the role of delinquent youth in environmental stress-challenge programs. A review of available literature pertinent to the topic was made, and a tentative checklist was developed consisting of approximately two hundred items. This section describes the procedures used in developing the original checklist, administering the pilot survey/interview, and refining the final instrument.

First, only those items which were readily adaptable to the basic format could be chosen for the final checklist. A Likert, five-point scale was selected as the basic format. According to this system a one and a five were assigned to the extreme ends of the expectations continuum, and a three assigned to the undecided position on each item or statement.[1] The following will serve as an example of this procedure:

> Please indicate the extent to which you believe that delinquent youth will or will not demonstrate the following attitudes or behavior while participating in your program:
>
> Cope with fears and anxieties 1 2 3 4 5
>
> The degree of response was indicated by circling the number representing that degree according to the following scale:
>
> 1 - Absolutely will not
> 2 - Probably will not
> 3 - May or may not
> 4 - Probably will
> 5 - Absolutely will

Likert utilized statements that were expressions of "desired

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[1]Rensis Likert, "A Technique for the Measurement of Attitudes," Archives of Psychology 140 (1932): 44-53.

behavior" and not "fact," and suggested using the term "should."[1] However, Likert was concerned with the measurement of attitudes, not expectations. Although these are similar, there are some subtle but important differences. The use of "should" would in fact measure the attitudes of respondents concerning the desired behavior, rather than the expected behavior, of delinquent youth. "Does" was also considered undesirable as it connotes the measurement of actual behavior. "Will" seemed most appropriate since it implies the future behavior of the delinquent youth while suggesting a relationship with the respondents' past experiences. Both of these qualities are inherent in the concept of role expectations (see "Definitions," p. 11).

Only those role expectations which referred to the affective domain were considered for the final checklist. Bloom et al, defined three separate, educational domains--cognitive, affective and psychomotor. The cognitive domain deals with recall or recognition of knowledge and the development of intellectual abilities and skills. The affective domain involves changes in interest, attitudes, and values, and the development of appreciations and adequate adjustment. The psychomotor is the manipulative or motor-skill area.[2]

Items were limited to affective role expectations for the following reasons:

1. Role expectations are more closely linked to attitudes than to cognitive knowledge or motor-skills (see "Definitions," p. 11).

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[1] Ibid., p. 44.

[2] Benjamin S. Bloom, ed., Taxonomy of Educational Objectives: The Classification of Educational Goals: Handbook 1 - Cognitive Domain (London: Longmans, Green and Co., LTD., 1956), p. 7.

2. Very little literature exists concerning cognitive and psychomotor objectives in environmental stress-challenge programs. Therefore, selection of items in these domains would be primarily based upon intuition and conjecture.

3. Most experts in the field consider the affective domain to be most relevant to the processes occurring in these high-intensity, short-term programs. This is supported by the work of Paul Harmon in developing objectives for Outward Bound.[1]

Affective role expectations were derived from three relevant, educational models--Outward Bound,[2] environmental education,[3] and Maslow's self-actualization theory.[4] Although there were other possible sources, these three provided a wide spectrum of potential items while maintaining a framework simple enough to be meaningful. On the other hand, using the Outward Bound model alone would not have produced as many descriminating items. Figure 5 illustrates the relationship between the final affective role expectations and these three models. Maslow's self-actualization theory was chosen because

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[1]Paul Harmon, The Measurement of Affective Education (San Francisco: Harmon Associates, 1974), pp. 20-23.

[2]See Paul Harmon, The Measurement of Affective Education pp. 20-23; and Katz and Kolb, Outward Bound and Education for Personal Growth, pp. 134-55.

[3]See National Park Service, National Environmental Education Development Program; and Van Matre, Acclimatization, pp. 15-22.

[4]See Maslow, Toward a Psychology of Being, pp. 21-27; and Everett L. Shostrom, "A Test for the Measurement of Attitudes," Educational Psychological Measurements XXIV (1970), pp. 207-08.

it is compatible with the expressed objectives of Outward Bound and has been used in several previous evaluation studies.[1]

It was also determined that all selected items should conform to the conceptual framework of the Taxonomy of Affective Role Expectations (Figure 6) and that all five major categories in the taxonomy should be represented in the final checklist for the following reasons:

1. The Taxonomy of Affective Role Expectations is basic to the first research hypothesis

2. The Taxonomy of Affective Role Expectations provides a theoretical framework for the development and interpretation of checklist items

3. The Taxonomy of Affective Role Expectations facilitates the selection of a wide range of items, representing all levels of the affective hierarchy

Both the form and the content of the taxonomy in Figure 6 are based upon the "Affective Domain of the Taxonomy of Educational Objectives" developed by Krathwohl, Bloom and Masia.[2] Bloom and others described this taxonomic classification system as follows:

> A taxonomy must be so constructed that the order of the terms must correspond to some "real" order among the phenomena represented by the terms...As we have defined them, the objectives in one class are likely to make use of and be built on the behaviors found in the preceding classes...[3]

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[1]See Robert B. VanderWilt and Ronald A. Klocke, "Self-Actualization of Females in an Experimental Orientation Program," National Association of Women's Deans and Counselors Journal (Spring, 1970): 125-29; and John V. Hartung, "An Evaluation of an Experiential Stress-Challenge Environmental Education College Course" (Ph.D. dissertation, Southern Illinois University, 1973).

[2]Krathwohl, Bloom and Masia, Taxonomy: Affective Domain, pp. 37, 176-85.

[3]Bloom et al., Taxonomy: Cognitive Domain, pp. 17-18.

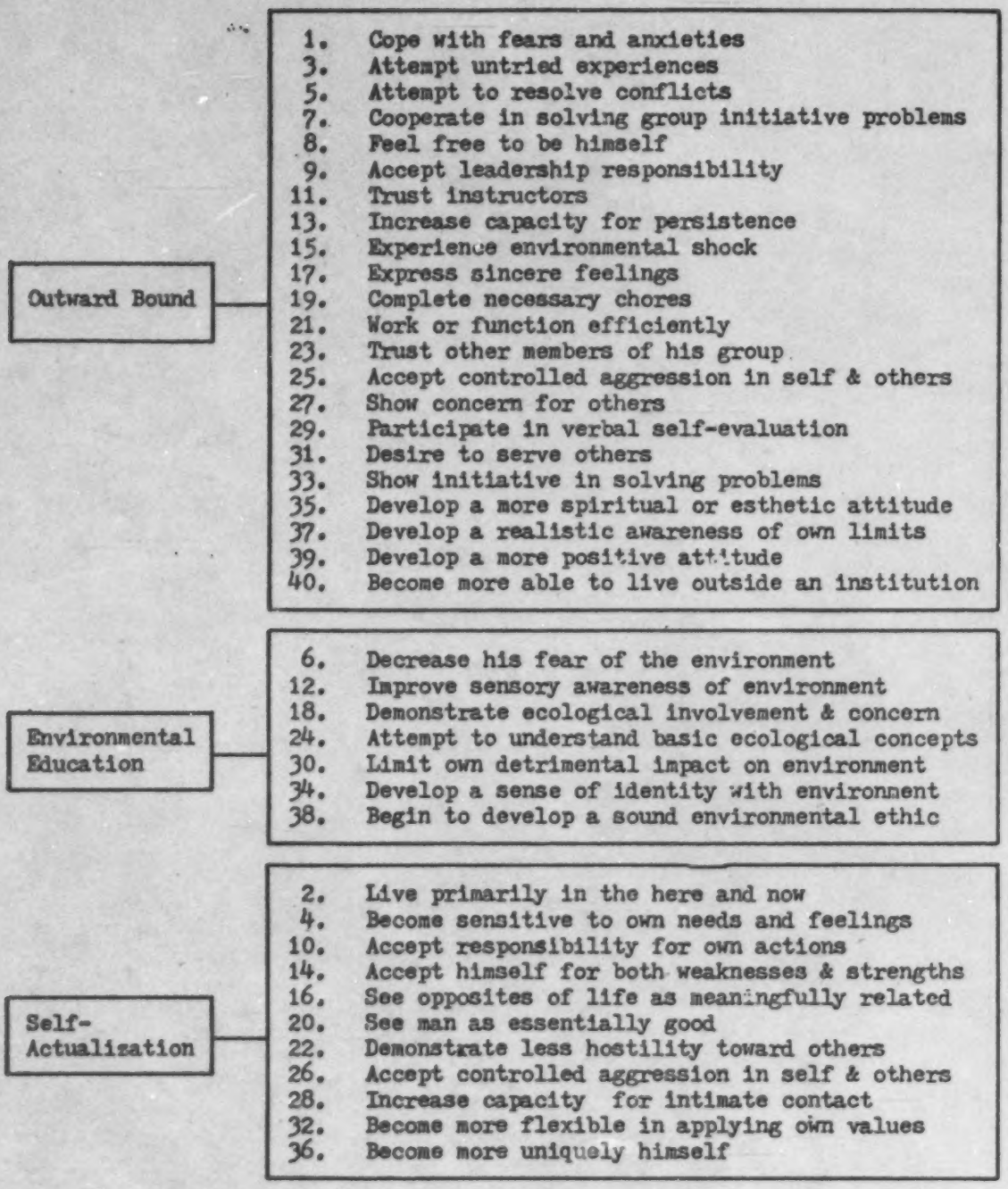
Outward Bound
1. Cope with fears and anxieties
3. Attempt untried experiences
5. Attempt to resolve conflicts
7. Cooperate in solving group initiative problems
8. Feel free to be himself
9. Accept leadership responsibility
11. Trust instructors
13. Increase capacity for persistence
15. Experience environmental shock
17. Express sincere feelings
19. Complete necessary chores
21. Work or function efficiently
23. Trust other members of his group
25. Accept controlled aggression in self & others
27. Show concern for others
29. Participate in verbal self-evaluation
31. Desire to serve others
33. Show initiative in solving problems
35. Develop a more spiritual or esthetic attitude
37. Develop a realistic awareness of own limits
39. Develop a more positive attitude
40. Become more able to live outside an institution
Environmental Education
6. Decrease his fear of the environment
12. Improve sensory awareness of environment
18. Demonstrate ecological involvement & concern
24. Attempt to understand basic ecological concepts
30. Limit own detrimental impact on environment
34. Develop a sense of identity with environment
38. Begin to develop a sound environmental ethic
Self-Actualization
2. Live primarily in the here and now
4. Become sensitive to own needs and feelings
10. Accept responsibility for own actions
14. Accept himself for both weaknesses & strengths
16. See opposites of life as meaningfully related
20. See man as essentially good
22. Demonstrate less hostility toward others
26. Accept controlled aggression in self & others
28. Increase capacity for intimate contact
32. Become more flexible in applying own values
36. Become more uniquely himself

Figure 5. Educational Models and Affective Role Expectations

1.0 RECEIVE	1.1	Awareness	4. Become sensitive to own needs & feelings 6. Decrease fear of the environment 12. Improve sensory awareness of environment 15. Experience environmental shock
	1.2	Willingness to Receive	2. Live primarily in the here and now 11. Trust instructors 22. Demonstrate less hostility toward others 25. Accept unavoidable discomfort
	1.3	Controlled or Selected Attention	1. Cope with fears and anxieties 13. Increase capacity for persistence 19. Complete necessary chores 37. Develop a realistic awareness of own limits
2.0 RESPOND	2.1	Acquiescence in Responding	3. Attempt untried experiences 7. Cooperate in solving group initiative problems 21. Work or function efficiently 23. Trust other members of his group 29. Participate in verbal self-evaluation 30. Limit own detrimental impact on environment
	2.2	Willingness to Respond	5. Attempt to resolve conflicts 17. Express sincere feelings 27. Show concern for others 33. Show initiative in solving problems
	2.3	Satisfaction in Response	8. Feel free to be himself 28. Increase capacity for intimate contact
3.0 VALUING	3.1	Acceptance of a Value	14. Accept himself for both weaknesses & strengths 26. Accept controlled aggression in self & others 39. Develop more positive attitude
	3.2	Preference for a Value	10. Accept responsibility for own actions 34. Develop a sense of identity with environment
	3.3	Commitment	9. Accept leadership responsibility
4.0 ORGANIZ	4.1	Conceptualization of a Value	20. See man as essentially good 24. Attempt to understand ecological concepts
	4.2	Organization of a Value System	35. Develop a more spiritual or esthetic attitude 38. Begin to develop a sound environmental ethic
5.0 CHARVAC	5.1	Generalized Set	18. Demonstrate ecological involvement & concern 31. Desire to serve others 32. Become more flexible in applying own values 40. Be more able to live outside an institution
	5.2	Characterization	16. See opposites of life as meaningfully related 36. Become more uniquely himself

Figure 6. Taxonomy of Affective Role Expectations

The Taxonomy of Affective Role Expectations is also a hierarchy based upon "real" phenomena, in this case--role expectations. This explains why more expectations fell into categories one and two. This distribution occurred naturally and was probably reflective of the nature of the programs being studied. It is unlikely that most experts in this field expect participants to develop a philosophical world view as a result of a thirty-day program. The testing of this theory is discussed later in this chapter and also in Chapter V.

Checklist items which fell within the above content parameters were compiled into a pilot survey. The pilot survey was then personally administered to a small sample of directors and instructors who were then presently working in environmental stress-challenge programs which accepted delinquent youth. The purpose of the pilot survey was to identify any undetected problem areas. Each respondent first completed the pilot survey with no assistance. The interviewer observed the respondent during this time, noting any interest lag and recording the completion time. When the respondent finished, the interviewer asked him or her to read the checklist again and describe any areas which presented difficulties. Only minor changes in wording were necessitated in the forty role expectations items. However, in Section I: "Program Data" and Section II: "Personal and Professional Data," nearly all of the original open-ended questions were transformed into dichotomous or multiple choice items. The checklist took approximately twenty minutes to complete and there was little or no apparent interest lag.

The final instrument was printed on one 11 inch by 17 inch piece

of paper which was folded to make a single, four page pamphlet. The front page was a cover letter containing pertinent information concerning the purposes and procedures of the study. This letter was signed by both sponsors of the study, Dr. Paul Yambert of Southern Illinois University and Derek Pritchard, Director of Minnesota Outward Bound School. The second page of the instrument consisted of "Section I: Program Data," and "Section II: Personal and Professional Data." Section I included: (1) length of courses in days; (2) demographic data of participants; and (3) program components. Section II included: (1) present position; (2) sex; (3) age; (4) highest degree held; (5) major field of study; (6) experience in present program; (7) experience in outdoor education; and (8) source of outdoor education and related skills training. "Section III: Checklist of Affective Role Expectations for Delinquent Youth" comprised pages three and four of the instrument. This section consisted of: (1) instructions for completion; (2) forty Likert-type items; and (3) one open-ended question. A copy of this instrument may be found in Appendix B.

Data Collection Procedures

The instrument, after final revisions, was mailed to the fifty-eight program directors who indicated on the pre-survey that their programs met the following criteria:

1. The program was an environmental stress-challenge program
2. The program accepted delinquent youth as participants
3. The director indicated that he was willing to participate in the study

Each program received a checklist for the director and most programs

received a checklist for one or two instructors, depending upon responses to the pre-survey. Each checklist included a self-addressed, stamped envelope. A typewritten letter to the director was also included. The purpose of this letter was to facilitate dissemination of the checklists to the instructors. In both the introductory and cover letters, and in the checklists, emphasis was placed upon the fact that the purpose of the study was not to evaluate any program or individual. A packet containing the above materials was sent to each program director on February 15, 1976. The contents of this packet appear in Appendix B. Each program was promised a copy of the summary of the study.

Upon completing the instrument, each respondent individually placed it in the stamped, addressed envelope and mailed it directly to Dr. Paul Yambert, Forestry Department, Southern Illinois University-Carbondale. All respondents remained anonymous. It was asked that the checklists be returned by March 1, 1976.

A total of ninety-seven checklists were returned. This represented 64.7 percent of the total mailed. All of the returned checklists were adaptable for statistical interpretation. Table II shows that out of fifty-eight directors, forty-nine or 84.5 percent responded. Out of a possible ninety-two instructors, a total of forty-eight checklists were returned making their response 52.2 percent. Two main factors apparently contributed to the significantly lower response rates of instructors:

1. Instructors were not contacted directly by name, but received checklists through their director

2. Most instructors were either working in the field or were away from the program for rest and recreation

3. Some programs were primarily seasonal and instructors were not presently located at the base camp

This was indicated by directors' comments and by the fact that many instructors' returns carried postmarks of locales different from those of the programs included in the study.

TABLE 2

GENERAL CATEGORIES OF RESPONDENTS FROM WHICH DATA WERE COLLECTED

Position	Checklists Mailed	Checklists Returned	Percentage of Respondents
Director	58	49	84.5
Instructor	92	48	52.2
Total	150	97	64.7

Data Analysis Procedures

Statistical Package for the Social Sciences (SPSS) was utilized to perform the data analysis in this study. SPSS is defined by its authors as "an integrated system of computer programs designed for the analysis of social science data."[1] They point out some of the advantages of SPSS for the social scientist:

[1]Nie et al., Statistical Package for the Social Sciences, p. 1.

1. The system provides a unified and comprehensive package that enables the user to perform many different types of data analysis in a simple and convenient manner.
2. SPSS allows a great deal of flexibility in the format of data.
3. It provides the user with a comprehensive set of procedures for data transformation and file manipulation.
4. It offers the researcher a large number of statistical routines commonly used in the social sciences.[1]

Because this study incorporated many variables and because there were few guiding principles developed by previous research, the flexible and iterative capabilities of the SPSS system made it particularly appropriate.

Some of the data analysis in this study involved an iterative process. Certain original conceptions were altered or refined in light of the data, and further analysis was performed to test these refined ideas. For example, one of the problems stated in Chapter I was to identify independent personal and professional variables which significantly affect the affective role expectations. Frequency analysis of the responses to Item 8 of Section II: "Personal and Professional Data" showed a definite split between those professionals with Outward Bound training and those without. A statistical hypothesis was developed and tested. It was subsequently discovered that there was a significant relationship between the variable and responses to many of the affective role expectations.

Nie et al, define this process as inductive social research and describe the following form that it ideally takes:

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[1] Ibid., p.2

1. The researcher begins with a set of ideas concerning the operation of certain aspects of social reality. This involves the isolation of variables at the conceptual level and the formation of some general notions concerning their interrelationships and causal effects upon each other.
2. An empirical data base is generated, containing indicators of the conceptual variables in which the researcher is interested.
3. The researcher then formulates more concrete hypotheses concerning what pattern of interrelationships should be found in the empirical indicators if the original ideas about the operation of social reality were correct.
4. The data are then analyzed using one or more of a variety of statistical techniques in order to determine whether the expected pattern of relationships can actually be discerned in the data.[1]

In general, this study used these inductive social research processes. The rest of this chapter describes the specific methodology used in the analysis of data.

The problem statements and the basic assumptions in Chapter I outline a set of ideas concerning the operation of certain aspects of social reality in the relation to the affective role expectations which directors and instructors indicate for delinquent youth in environmental stress-challenge programs. Based on these ideas an instrument was developed and administered to generate a raw data base related to these conceptual variables. This raw data base included:

1. Program data
2. Personal and professional data
3. Responses to the forty affective role expectation items utilizing the five point scale
4. Written responses to the open-ended item number forty-one

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[1]Ibid., p. 2.

Each completed checklist was coded in terms of the program data, the personal and professional data, and the affective role expectations indicated by respondents. This information was keypunched on computer cards. All alphnumeric variables were recoded to numeric values (0,5). Two cards were punched for each respondent's case. The analysis of these data was determined by the following sets of statistical hypotheses and techniques.

Statistical Hypothesis I

H_0: Response to the affective role expectations as categorized by the taxonomy = simple functions of a single latent variable

H_1: Responses to the affective role expectations as categorized by the taxonomy $\neq$ simple functions of a single latent variable

This hypothesis is adapted from the Goodenough technique for scale analysis.[1] This technique is based on Guttman's definition of a scale.[2] The Guttman Scalogram Analysis Procedure and Statistics were utilized to test this hypothesis.

Guttman's Scalogram Analysis tests whether or not the items in the scale, in this case the five major categories of the Taxonomy of Affective Role Expectations, are unidimensional and cumulative. The following four statistics are computed by SPSS to aid in evaluating

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[1]Ward H. Goodenough, "A Technique for Scale Analysis," Educational and Psychological Measurement 8 (1944): 180-81.

[2]Louis Guttman, "A Basis for Scaling Qualitative Data," American Sociological Review IX (1944): 139-50.

the scalability of the items:

1. The coefficient of reproducibility indicates the degree of correlation between a respondent's scale score or type and his response pattern

2. The minimum marginal reproducibility is the minimum coefficient of reproducibility that could have resulted from the scale with the same proportion of respondents accepting and rejecting each of the items or categories

3. The percent improvement is the difference between statistics one and two above, and represents the degree to which the coefficient of reproducibility is a result of response patterns rather than the inherent cumulative interrelation of the items or categories

4. The coefficient of scalability indicates whether or not the scale is truly unidimensional and cumulative[1]

As described previously in this chapter, the role expectation items were chosen a priori based upon research in the field and were assigned to the five categories of the taxonomy according to the guidelines established by Krathwohl and others. A respondent was considered to have accepted a particular taxonomic category if he scored 65 percent or more of the total possible points for all the items in that category (based on a maximum value of five for each item). This cutting point of 65 percent was selected by the author because it produced a scale in which no category had more error in it than non-error, and in which there were no excesses of respondents at the extremes.

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[1] Nie et al., Statistical Package for the Social Sciences, pp. 532-33.

This procedure is accepted by both Edwards and Green in discussion of Guttman Scales.[1]

Since little or no research has been done concerning the universe of attributes related to affective role expectations for delinquent youth in environmental stress-challenge programs, this hypothesis was considered essential to answering the following basic questions:

1. Did the affective role expectations mean the same thing to the individual respondents?

2. Are the affective role expectations unidimensional and cumulative? In other words, can they be meaningfully classified according to a true taxonomy?

If the null hypothesis is accepted and the categories of items do form a scale, then it follows that the answer to these questions is "yes." This relationship between the scalability of items and the clarity of their content areas is a subtle but important one. Lazarsfeld considered this relationship in developing the latent variable and that only because each item is related to the same underlying variable are they related to each other.[2] Guttman related

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[1]See Allen L. Edwards, Techniques of Attitude Scale Construction (New York: Appleton-Century-Crofts, Inc., 1957), pp. 178 and 237, and Bert F. Green, "Attitude Measurement" in Handbook of Social Psychology, 2 vols., ed. Gardner Lindzey (Cambridge, Mass.: Addison-Wesley Publishing Company, Inc., 1954), 1: 354.

[2]Paul F. Larzarsfeld, "Improved Model for a Latent Distance Scale, Paper 3," The Use of Mathematical Models in the Measurement of Attitudes, H.M.-455, Part II (Santa Monica, California: Columbia University, U.S.A.F. Project "Rand," The Rand Corporation, 1951).

the phenomenon of scalability to objective reality by stating that:

> In practice we find scales, although never perfect scales, only because there has been sufficient uniformity of experience for the population of individuals so that the attributes mean essentially the same thing to the different individuals.[1]

Over the past thirty years the following rigorous criteria have been developed by various researchers to determine whether a sample of attributes is truly scalable:

1. No category should have more error in it than non-error[2]
2. Errors should be random[3]
3. There should be no excesses of respondents at the extremes of the scale[4]
4. Error should be measured in terms of the number of responses departing from a predicted perfect reproducibility pattern[5]
5. The coefficient of reproducibility should be greater than .9[6]
6. The coefficient of scalability should be greater than .6[7]
7. Minimum marginal reproducibility should be greater than .2 and less than .8[8]

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[1]Louis Guttman, "A Basis for Scaling Qualitative Data," p. 149-50.

[2]Louis Guttman, "The Cornell Technique for Scale and Intensity Analysis," Educational and Psychological Measurement 7 (1947): 258-61.

[3]B. F. Green, "Attitude Measurement," p.356.

[4]A. L. Edwards, Techniques of Attitude Scale Construction, p. 205.

[5]Allen L. Edwards, "On Guttman's Scale Analysis," Educational and Psychological Measurement 8 (1948): 317-18.

[6]N. H. Nie et al., SPSS, p. 533.

[7]Ibid., p. 533.

[8]B. F. Green, Attitude Measurement, p. 356.

8. The percent improvement should be greater than .2[1]

All of these criteria were utilized in evaluating the Guttman scale analysis for the Taxonomy of Affective Role Expectations.

Statistical Hypothesis II

Group 1 = All program directors

Group 2 = All program instructors

H_0: The mean response of Group 1 = the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

H_1: The mean response of Group 1 $\neq$ the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

Statistical Hypothesis III

Group 1 = All respondents with no Outward Bound training

Group 2 = All respondents with Outward Bound training

H_0: The mean response of Group 1 = the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

H_1: The mean response of Group 1 $\neq$ the mean response of Group 2 for each item on the Checklist of Affective Role Expectations.

Statistical Hypothesis IIIa

Group 1 = All respondents with three years or more experience in present program

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[1]A. L. Edwards, Techniques of Attitude Scale Construction, p. 209.

Group 2 = All respondents with less than three years experience in present program

H_0: The mean response of Group 1 = the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

H_1: The mean response of Group 1 $\neq$ the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

Statistical Hypothesis IV

Group 1 = All respondents from programs with 50 percent or more delinquent youth

Group 2 = All respondents from programs with less than 50 percent delinquent youth

H_0: The mean response of Group 1 = the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

H_1: The mean response of Group 1 $\neq$ the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

Statistical Hypothesis IVa

Group 1 = Respondents from programs <u>not</u> accepting participants sixteen in age or older

Group 2 = Respondents from programs accepting participants sixteen in age or older

H_0: The mean response of Group 1 = the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

H_1: The mean response of Group 1 $\neq$ the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

Statistical Hypothesis IVb

Group 1 = Respondents from programs having no courses over nine days in length

Group 2 = Respondents from programs having courses of ten days or more

H_0: The mean response of Group 1 = the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

H_1: The mean response of Group 1 $\neq$ the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

Statistical Hypothesis IVc

Group 1 = All respondents from programs having no long term follow-up component

Group 2 = All respondents from programs having a long term follow-up component

H_0: The mean response of Group 1 = the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

H_1: The mean response of Group 1 $\neq$ the mean response of Group 2 for each item on the Checklist of Affective Role Expectations

An Alpha level of .05 was determined a priori as an acceptable level of significance for the null hypotheses (ii-IVc). The t statistic and the related two-tailed probability was computed for each role expectation item within each set of hypotheses. H_0 was rejected for a particular item if the two-tailed probability was less than .05.

CHAPTER IV

PRESENTATION OF PROGRAM, PERSONAL AND PROFESSIONAL DATA

The data for this study were gathered from fifty-eight environmental stress-challenge programs in the United States which accepted delinquent youth as participants. The programs included in this study were located in twenty-seven states and represented all of the programs which indicated that they accepted delinquent youth as participants. The purpose of this chapter is to introduce the program data and the personal and professional data derived from Sections I and II of the instrument which appears in Appendix B. The program, personal and professional data were alphanumeric and nominal. The principal functions of these data were as follows:

1. Provide a general profile of program design as represented by program components and length of courses

2. Provide a general profile of the populations served by such programs

3. Provide a general profile of professionals working in such programs as directors or instructors

4. Provide data necessary for the division of respondents into separate groups based upon relevant program or personal and professional, independent variables

5. Provide the background needed for the statistical interpretation of the quantified data appearing in Chapter V

Table 3 lists the number of programs which participated in this study by states. It is interesting to note that the programs which participated in this study were not limited to one or two geographic areas, but were fairly well spread across the country. The one exception to this was the deep South where very few programs were contacted. This could be due to the fact that few such programs exist in the South or that the author was simply unable to locate them.

TABLE 3

ENVIRONMENTAL STRESS-CHALLENGE PROGRAMS FOR DELINQUENT YOUTH: LOCATION BY STATES

States	Number of Programs	States	Number of Programs
Arizona	1	New Hampshire	2
California	2	New Jersey	2
Colorado	6	New Mexico	1
Connecticut	2	New York	1
Georgia	1	North Carolina	2
Idaho	1	Oregon	3
Illinois	3	Pennsylvannia	3
Maine	2	Utah	3
Massachusetts	3	Vermont	2
Michigan	1	Virginia	1
Minnesota	6	Washington	1
Missouri	5	Wisconsin	1
Montana	1	Wyoming	1
Nebraska	1	Total	58

The information afforded by directors concerning Item 1, Section I of the Checklist is summarized in Table 4. Respondents were instructed to check one or more appropriate categories describing the length(s) of courses in their program. The reader is referred to Appendix B for the actual structure of this item. In order to avoid multiple responses from a single program, only directors' responses were included in Tables 4 through 7.

TABLE 4

PROGRAM DESIGN: COURSE LENGTH

Length of Courses	Absolute Frequency	Relative Frequency
Less than 4 days	11	22.4
4-9 days	13	26.5
10-30 days	31	63.3
More than 30 days	9	18.4

Of the forty-nine directors surveyed, 22.4 percent indicated that their program offered courses of less than four days duration; 26.5 percent included courses of four to nine days duration; 63.3 percent offered courses of from ten to thirty days duration; and 18.4 percent had courses longer than thirty days. Approximately fifteen programs offered courses from various length categories. The most common length of course category was ten to thirty days. These data seem to reflect the strong influence of Outward Bound on

program design. The standard Outward Bound course is twenty-one to twenty-six days in length.

Table 5 represents another aspect of program design. Table 5 summarizes directors' responses to Item 3 in Section I of the checklist. Item 3 asked respondents to check components which described part of their program. In Table 5, the components were divided into three categories: (1) Type A; Outward Bound; (2) Type B: Agency Innovations; and (3) Others. Type A and Type B represent the literature sources from which components were extracted. "Others" were taken from the open-ended part of Item 3 and were supplied by directors. Components are not listed in Table 5 by frequency or order of appearance on checklist, but by their logical relationships in an actual program design. The reader is referred to Appendix B for the order of appearance of components on the checklist.

The most obvious inference that can be drawn from these data is, again, the strong influence of Outward Bound on program design. The majority of programs incorporated seven of the ten Outward Bound components. Forty-six directors or 93.9 percent indicated that Outdoor Skills Training and Wilderness Expedition were a part of their program. These two components were closely followed by Environmental Awareness, 87.8 percent; Initiative Course, 75.5 percent; and Emergency Care Training, 73.5 percent. Solo and Community Service were also checked by the majority of directors. The three Outward Bound components which were not utilized by the majority of the programs in this study were Immersion, Base Camp Phase and Marathon. Unlike the other Type A components, Immersion and Base Camp Phase are not a part of most

Outward Bound schools in the United States. Marathon may be excluded from many programs for delinquent youth because of its competitive tone.

TABLE 5

PROGRAM DESIGN: COMPONENTS

Component	Absolute Frequency	Relative Frequency
Type A: Outward Bound		
Immersion	15	30.6
Base Camp Phase	22	44.9
Initiative Course	37	75.5
Outdoor Skills Training	46	93.9
Emergency Care Training	36	73.5
Environmental Awareness	43	87.8
Wilderness Expedition	46	93.9
Solo	33	67.3
Community Service	30	61.2
Marathon	16	32.7
Type B: Agency Innovation		
Recruitment & Screening	21	42.9
Program Orientation	28	57.1
Counseling	36	73.5
Youth Leaders	19	38.8
Urban Experience	6	12.2
Long Term Follow-Up	13	26.5
Others		
Academic Learning	2	4.1
Adult-Youth-"Partnerships"	2	4.1
Centering Exercises	1	2.0

Only two of the Type B components were utilized by the majority of the programs in this study. Of the programs surveyed, 73.5 percent incorporated Counseling, and 57.1 percent utilized Program Orientation. These results may be misleading as many directors indicated that counseling and orientation were a part of the total program but were not viewed as separate entities. These two components were followed by Recruitment and Screening, 42.9 percent; Youth Leaders, 38.8 percent; and Urban Experience, 12.2 percent. It is interesting to note that although Long Term Follow-Up is often mentioned in the literature as being necessary for a successful program for delinquents, only 26.5 percent of the programs surveyed incorporated this component.

Two program directors added "Academic Learning" to the components checklist. Two program directors also added "Adult-Youth Partnerships" as a component describing part of their program. One director added "Centering Exercises" which included yoga and meditation. In Table 6 the components utilized by the majority of programs are listed in rank order according to the frequency distribution of directors' responses.

These program data derived from items one and three of Section I, suggest that a typical environmental stress-challenge program for delinquent youth offers courses ranging in length from ten to thirty days and included program orientation, counseling, initiative courses, outdoor skills training, emergency care training, environmental awareness, a wilderness expedition, solo and service to the community.

TABLE 6

RANK ORDER OF COMPONENTS
UTILIZED BY THE MAJORITY OF PROGRAMS

Type	Component	Absolute Frequency	Relative Frequency
A	Outdoor Skills Training	46	93.9
A	Wilderness Expedition	46	93.9
A	Environmental Awareness	43	87.8
A	Initiative Course	37	75.5
A	Emergency Care Training	36	73.5
B	Counseling	36	73.5
A	Solo	33	67.3
A	Community Service	30	61.2
B	Program Orientation	28	57.1

Table 7 summarizes the response of directors to Item 2, Section I of the checklist. This item refers to the demographic data of program participants. As with items one and three, respondents were instructed to check one or more appropriate categories. The reader is referred to Appendix B for the actual structure of this item and its sub-categories. The frequencies represent the number and percent of programs whose participants fall within the parameters of each demographic category within each variable.

TABLE 7

DEMOGRAPHIC CATEGORIES OF PROGRAM PARTICIPANTS

Variables and Categories	Absolute Frequency	Relative Frequency
Age Range in Years		
12 and under	10	20.8
13-15	35	72.9
16-19	32	66.7
20-adult	21	43.8
From Urban Environment		
50 percent or less	11	23.4
51-75 percent	14	29.8
76-100 percent	22	46.8
Racial Minorities		
0-25 percent	30	61.2
26-50 percent	11	22.4
51-75 percent	3	6.1
76-100 percent	5	10.2
Female		
None	2	4.1
1-25 percent	9	18.4
26-50 percent	28	57.1
51-75 percent	10	20.4
76-100 percent	0	0.0
Delinquent Youth		
1-25 percent	27	56.3
26-50 percent	7	14.6
51-75 percent	3	6.3
76-100 percent	11	22.9

Of the forty-nine directors surveyed, 20.8 percent indicated that their program accepted children who were twelve years old or younger; 72.9 percent accepted early adolescents between the ages of thirteen and fifteen; 66.7 percent accepted late adolescents between the ages of sixteen and nineteen; and 43.8 percent accepted adults who were over twenty years old. Thirteen to fifteen year olds were accepted into more programs than any other age group.

Twenty-two programs representing 46.8 percent of the total, served populations predominantly from urban environments. Fourteen programs or 29.8 percent served populations comprised of from 51 to 75 percent urban youth. Only 23.4 percent of the programs enrolled less than a majority of youth from an urban environment.

Of the total programs surveyed, 61.2 percent served populations comprised of less than 25 percent racial minorities; and 22.4 percent of the programs enrolled between 26 and 50 percent racial minorities. Only 16.3 percent served populations comprised of more than 50 percent racial minorities.

Of the forty-nine programs surveyed, 4.1 percent accepted no females; 18.4 percent enrolled fewer than 26 percent females; 57.1 percent enrolled 26 to 50 percent females; and 20.4 percent enrolled 51-75 percent females. No programs served populations comprised of more than 75 percent females.

These data indicate that a program, typical of those included in this study, serves a population comprised mainly of white, urban males and females between the ages of thirteen and nineteen. The majority of programs accepts only a small percentage of delinquent

youth. However, there are some agency sponsored programs which accept only delinquent youth.

Table 8 summarizes the responses of directors and instructors to Items 2, 3 and 4 in Section II of the checklist. These items refer to certain demographic data concerning the respondents. These data are sex, age and highest degree held. The reader is referred to Appendix B for the actual structure of these items. The absolute and relative frequencies are separated for directors and instructors in the first four columns of the table, and combined for total frequencies in the last two columns. This general format is also used in Tables 9, 10 and 11.

The large majority of all respondents, 78.9 percent, were male with 89.6 percent of the directors, and 68.1 percent of the instructors being male. A large number of respondents, 50.5 percent, did not report their age. Most of the directors who responded to this item were between twenty-three and thirty-four years of age. The over-all age range for these directors was twenty-three to sixty-two years with the mean being 32.17 years. The majority of the instructors who responded to this item were between twenty-one and twenty-seven years of age. These instructors were generally younger than the directors with the over-all age range being twenty-one to thirty-five years with a mean of 26.91 years. The age range for all respondents was twenty-one to sixty-two years with a mean of 29.28 years.

Most directors held a graduate degree with 42.9 percent having master's and 12.2 percent having doctoral degrees. Only one director reported having received no college degree. Of the instructors, 18.8 percent had no college degree; 54.2 percent held bachelor's degrees; and 27.1 percent had received a master's degree. None of the

TABLE 8

DEMOGRAPHIC DATA OF RESPONDENTS

Variable	Directors		Instructors		Total	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
Sex						
Male	43	89.6	32	68.1	75	78.9
Female	5	10.4	15	31.9	20	21.1
Age						
21-27	7	14.3	19	39.6	26	26.8
28-34	6	12.3	7	14.6	13	13.4
35-41	2	4.1	4	8.3	6	6.2
42-62	3	6.1	0	0.0	3	3.1
Missing	31	63.3	18	37.5	49	50.5
Education						
High School	1	2.0	9	18.8	10	10.3
Bachelor's	21	42.9	26	54.2	47	48.5
Master's	21	42.9	13	27.1	34	35.1
Doctoral	6	12.2	0	0.0	6	6.2

instructors surveyed had received a doctoral degree.

Table 9 summarizes the responses of directors and instructors to Item 5, "Major Field of Study," in Section II of the checklist. This item was an open-ended one and the eight categories were derived from a pooling of similar responses. The major field of study for 42.9 percent of the directors surveyed was Education. This was followed by 20.4 percent in the Behavioral Sciences; 16.3 percent in the Social Sciences; 10.2 percent in the Natural Sciences; 8.2 percent in Communications; and 2.0 percent in the Physical Sciences. The highest frequency of response for instructor's major field of study was also Education with 50.0 percent. This major was followed in frequency of instructors' responses by Behavioral Sciences with 18.8 percent; Natural Sciences with 10.4 percent; Social Sciences with 8.3 percent; Business with 6.4 percent; Communications with 4.2 percent; and Fine Arts with 2.1 percent.

Table 10 summarizes the responses of directors and instructors to Items 6, 7 and 8 in Section II of the checklist. Items 6 and 7 asked for the number of years and months of respondents' experience in their present program and in outdoor education. Months were rounded off to the nearest year to facilitate computation and analysis. Item 8 asked respondents to specify the general source of their outdoor education and related skills training. This item contained three closed and one open-ended category.

TABLE 9

RESPONDENTS' MAJOR FIELDS OF STUDY

Major Field	Directors		Instructors		Total	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
Education	21	42.9	24	50.0	45	46.4
Behavioral Sciences	10	20.4	9	18.8	19	19.6
Social Sciences	8	16.3	4	8.3	12	12.4
Natural Sciences	5	10.2	5	10.4	10	10.3
Communications	4	8.2	2	4.2	6	6.2
Business	0	0.0	3	6.4	3	3.1
Physical Sciences	1	2.0	0	0.0	1	1.0
Fine Arts	0	0.0	1	2.1	1	1.0

TABLE 10

EXPERIENCE AND TRAINING OF RESPONDENTS

Variable and Categories	Directors		Instructors		Total	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
Experience in Present Program						
2 years or less	15	31.3	22	46.8	37	39.0
3-4 years	13	27.1	20	42.6	33	34.7
5-6 years	13	27.1	3	6.4	16	16.9
7-10 years	7	14.6	2	4.2	9	9.5
Experience in Outdoor Education						
4 years or less	16	33.3	34	70.8	50	52.1
5-8 years	18	37.6	8	16.7	26	27.1
9-12 years	10	20.9	5	10.4	15	15.7
13-20 years	4	8.4	1	2.1	5	5.1
Outdoor Education and Related Skills Training						
National Outdoor Leadership Sch.	6	12.2	5	10.4	11	11.3
Outward Bound	30	61.2	23	47.5	53	54.6
University or College	32	65.3	19	39.6	51	52.6
American Red Cross	29	59.2	29	60.4	58	59.8
Others	35	71.4	36	75.0	71	73.2

Directors were evenly spread over the first three categories of years of experience in their present program with 31.3 percent having two years experience or less; and 27.1 percent having three to four years experience; and 27.1 percent with five to six years experience. Only 14.6 percent had seven to ten years experience. The mean number of years experience in their present program was 4.06 for directors. Present program experience for the large majority of instructors fell within the first two categories with 46.8 percent having two years experience or less and 42.6 percent having three or four years experience. The mean number of years experience in their present program was 2.73 for instructors. The mean for all respondents was 3.42 years.

The large majority of directors were in the first two categories of years of experience in outdoor education with 33.3 percent having had four years experience or less; 37.6 percent having had five to eight years experience; 20.9 percent having had nine to twelve years experience; and 8.4 percent having had thirteen to twenty years experience in outdoor education. The mean number of years experience in outdoor education was 6.92 for directors. Most instructors were in the first category of years experience in outdoor education with 70.8 percent having had four years experience or less; 16.7 percent having had five to eight years experience; 10.4 percent having had five years experience; and only 2.1 percent having had thirteen to twenty years experience. The mean number of years experience in outdoor education was 4.58 for instructors. The mean for all respondents was 5.75 years.

Item 8 in Section II directed respondents to indicate general sources for their outdoor education and related skills training. This item is represented by the last variable on the stub of Table 10. The categories under related training are not mutually exclusive and most respondents checked more than one. Of the directors surveyed, 12.2 percent received training at the National Outdoor Leadership School; 61.2 percent received training from Outward Bound; 65.3 percent received training from a university or college; 59.2 percent received training from the American Red Cross; and 71.4 percent received training from various other sources. Of the instructors surveyed, 10.4 percent received training from the National Outdoor Leadership School; 47.5 percent received training from Outward Bound; 39.6 percent received training from a university or college; 60.4 percent received training from the American Red Cross; and 75.0 percent received training from various other sources. These other sources are presented in greater detail in Table 11.

It is interesting to note that a much higher percentage of directors listed universities and colleges as a source of outdoor education and related skills training. This information seems to correlate with the fact that 55 percent of the directors, but only 27 percent of the instructors held graduate degrees. These data suggest a paucity of undergraduate programs which offer training directly related to the instructor's position. It is also interesting to note that although there is only one National Outdoor Leadership School, and there are only seven Outward Bound Schools in the U.S., 73.4 percent of the directors and 57.9 percent of the instructors listed these as sources

of their outdoor education and related skills training. This seems to suggest that these schools have been very instrumental in the development of personnel for environmental stress-challenge programs.

Table 11 summarizes response to the "Others" category of Item 8 in Section II of the checklist. This category was open-ended and required the respondent to supply sources of outdoor education and related skills training in addition to the four listed in the checklist. There were a large number of various sources listed by respondents and consequently several of the sub-categories in Table 11, such as "Inservice" and "U.S. Special Forces," were derived from a pooling of similar responses.

"Inservice" was listed most frequently as an additional source of training with 34.7 percent of the directors and 18.8 percent of the instructors receiving inservice training. Inservice training consists of training received by the respondent from the program in which he or she works. Emergency Medical Technician training was completed by 16.3 percent of the directors and 6.3 percent of the instructors. This was closely followed by the Boy Scouts of America, U.S. Special Forces (various branches of the Armed Forces) and "Personal Experience" with 9.3 percent of the respondents listing each of these sources. Another 16.3 percent of the respondents listed a wide variety of sources including professional organizations such as the American Camping Association, environmental organizations such as the Sierra Club, and outdoor recreation organizations such as the Appalachian Mountain Club. It is interesting to note the great variety of sources for outdoor education and related skills training

TABLE 11

RELATED TRAINING SUPPLIED BY RESPONDENTS

Related Training	Directors		Instructors		Total	
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
Others						
Inservice	17	34.7	9	18.8	26	26.8
Emergency Medical Technician	8	16.3	3	6.3	11	11.3
Boy Scouts of America	5	10.2	4	8.3	9	9.3
U.S. Special Forces	4	8.2	5	10.4	9	9.3
Personal Experience	3	6.1	6	12.5	9	9.3
Appalachian Mountain Club	2	4.1	2	4.2	4	4.1
U.S. Peace & Job Corps	3	6.1	0	0.0	3	3.1
Amer. Avalanche Institute	1	2.0	0	2.1	2	2.1
Adirondack Mountain Club	1	2.0	0	0.0	1	1.0
Prof. Ski Tour Association	0	0.0	1	2.1	1	1.0
National Ski Patrol	1	2.0	0	0.0	1	1.0
Junior Maine Guide Program	1	2.0	0	0.0	1	1.0
American Camping Association	1	2.0	0	0.0	1	1.0
Sierra Club	1	2.0	0	0.0	1	1.0
Audubon Society	0	0.0	1	2.1	1	1.0

compared to the small population size. In all, over thirty-five sources were listed by ninety-seven respondents. This does not include the large number of specific universities and colleges which were listed separately by respondents, but were combined into one category.

These data indicate that a program director, typical of those surveyed, is a thirty-two year old male who has completed a master's degree with a major emphasis in education. He has received outdoor education and related skills training from a university or college, Outward Bound and the American Red Cross. He has four years experience in his present program and seven years experience in outdoor education. An instructor, typical of those surveyed, is a twenty-seven year old male who has completed a bachelor's degree with a major emphasis in education. He has received outdoor education and related skills training from Outward Bound and the American Red Cross. He has three years experience in his present program and five years experience in outdoor education.

This chapter has presented the program, personal and professional data derived from Sections I and II of the checklist. Section I was concerned with the program data including certain demographic classifications of program participants. Section II was concerned with demographic and professional data related to the respondents. General profiles of the program design, the populations served by such programs, and the personnel involved were described both in detail and in summary. Broad generalization from these limited data is discouraged. The purpose of this chapter was to

provide a logical framework for the interpretation of the affective role expectation data which appear in the following chapter, and to provide a more empirical base for further of environmental stress-challenge programs for delinquent youth.

CHAPTER V

ANALYSIS OF AFFECTIVE ROLE EXPECTATION DATA

The focus of this chapter is the analysis and interpretation of the data derived from Section III of the questionnaire. This chapter is divided into six sections. The first section presents the frequency distribution of responses to the role expectation items. Section two concerns the scalogram analysis of responses to items as categorized by the Taxonomy of Affective Role Expectations. The third section briefly describes the procedure utilized by SPSS for computation of the Student's t. Section four reports the extent of consensus between directors and instructors. Sections five and six concern the effect of selected professional and program data on the affective role expectations indicated by respondents.

Frequency Distribution of Responses to Affective Role Expectation Items

Table 12 presents the relative frequency distribution of responses to the forty checklist items concerning the affective role expectations held by respondents for delinquent youth who participate in their program. It should be noted that some of the items have been condensed in this table and those which follow in order to facilitate tabulation. The reader is referred to Appendix B for the items in their original form. Those directors and instructors

who checked "probably will" (4), or "absolutely will" (5) for a particular item, were considered to be holding that role expectation. The relative frequency of respondents who do hold a particular expectation appears in the first column. Those respondents who checked "may or may not" (3), "probably will not" (2), "absolutely will not" (1), or left an item blank (0), were not considered to be holding that expectation. The relative frequency of respondents who do not hold a particular expectation appears in the second column. The third column represents the mean score for all respondents for a particular item. The number of the taxonomic category of each item appears in the fourth column. The items are listed in rank order with those expectations most frequently indicated by respondents appearing first.

It is interesting to note that generally those expectations which are low on the taxonomic hierarchy described in Chapter III, were indicated most frequently by respondents. Conversely, those expectations which are high on the taxonomic hierarchy were indicated less frequently by respondents. For example, Item 6, "Decrease his fear of the environment," which was indicated by 80.2 percent of the respondents, appears under the first or lowest taxonomic category, "Receiving." Item 16, "See opposites of life as meaningfully related," which was indicated by only 18.7 percent of the respondents, appears under the highest taxonomic category, "Characterization by a Value Complex." The reader is referred to Figure 6 on page 56 for the complete Taxonomy of Affective Role Expectations. This frequency distribution would seem to indicate that the lower or more basic expectations were considered more realistic and were more likely to be held by program directors and instructors.

TABLE 12

RANK ORDER OF AFFECTIVE ROLE EXPECTATIONS

Affective Role Expectation	Percent Indicating Expectation (4-5)	Percent Not Indicating Expectation (0-3)	Mean (Range 0-5)	Taxonomic Category*
6. Decrease fear of the environment	80.2	19.8	3.990	1.1
3. Attempt untried experiences	76.0	23.9	3.990	2.1
12. Improve awareness of environment	70.8	29.2	3.904	1.1
39. Develop a more positive attitude	69.8	31.2	3.792	3.1
2. Live primarily in the here and now	66.6	33.3	3.750	1.2
11. Trust instructors	63.6	36.4	3.758	1.2
37. Develop awareness of limits	63.5	36.5	3.708	1.3
40. Able to live outside institution	63.5	36.5	3.745	5.1
22. Demonstrate less hostility	62.5	37.4	3.642	1.2
7. Cooperate in group problems	60.5	39.6	3.729	2.1
1. Cope with fears and anxieties	60.4	39.7	3.716	1.3
15. Experience environmental shock	59.4	40.7	3.831	1.1
25. Accept unavoidable discomfort	57.3	42.7	3.594	1.2
13. Increase persistence	56.3	43.7	3.617	1.3
19. Complete necessary chores	56.3	43.7	3.625	1.3
4. Sensitive to own needs & feelings	56.2	43.8	3.621	1.1
23. Trust members of group	56.2	43.8	3.552	2.1
28. Increase intimate contact	53.1	46.9	3.500	2.3
8. Feel free to be himself	51.1	48.9	3.583	2.3

*See page 56 for complete Taxonomy

TABLE 12--Continued

Affective Role Expectation	Percent Indicating Expectation (4-5)	Percent Not Indicating Expectation (0-3)	Mean (Range 0-5)	Taxonomic Category*
27. Show concern for others	50.0	50.0	3.490	2.2
17. Express sincere feelings	48.9	51.1	3.510	2.2
36. Become more uniquely himself	48.0	52.0	3.531	5.2
29. Participate in self evaluation	48.0	52.0	3.531	2.1
26. Accept controlled aggression	45.8	54.1	3.298	3.1
21. Work or function efficiently	44.8	55.2	3.375	2.1
32. More flexible in values	39.5	60.5	3.380	5.1
30. Limit impact on environment	38.5	61.5	3.313	2.1
10. Accept responsibility for actions	34.4	65.6	3.232	3.2
14. Accept weaknesses & strengths	34.4	65.6	3.242	3.1
34. Develop identity with environment	34.4	65.6	3.200	3.2
5. Attempt to resolve conflicts	33.4	66.6	3.301	2.2
9. Accept leadership responsibility	33.3	66.7	3.281	3.3
24. Understand ecological concepts	32.3	67.7	3.115	4.1
18. Demonstrate ecological concern	27.0	73.0	3.010	5.1
38. Develop environmental ethic	27.0	73.0	3.115	4.2
35. Develop esthetic attitude	25.1	74.9	3.073	4.2
31. Desire to serve others	20.9	79.1	2.927	5.1
20. See man as essentially good	20.8	79.2	3.086	4.1
16. See opposites as related	18.7	81.3	2.989	5.2

*See page 56 for complete Taxonomy

However, these simple data do not necessarily support the model developed in the taxonomy. If the model is a true taxonomy it is cumulative and unidimensional. This would mean that those respondents who rejected a low level expectation also rejected all those expectations which appear higher in the taxonomy. The frequency distribution does not substantiate such a relationship. This problem which is related to the first hypothesis of this study is discussed in the following section.

Scalogram Analysis of the Taxonomy
Of Affective Role Expectations

As described in Chapter III, the forty affective role expectations were categorized a priori into the five affective taxonomic categories developed by Krathwohl, Bloom and Masia. The five major categories appear below with a brief summary of their definitions. The reader is referred to The Taxonomy of Educational Objectives: Handbook II: Affective Domain for more detailed definitions and guidelines.

1.0 Receiving: Passively attending to or becoming aware of phenomena and stimuli.

2.0 Responding: Actively attending or commiting oneself to the phenomena involved.

3.0 Valuing: Believing that a phenomenon has worth. Developing an attitude toward a phenomenon.

4.0 Organization: Organizing a hierarchy of values. This includes "conceptualization of a value."

5.0 Characterization by a Value or Value Complex: Behaving according to a consistent system of values. Developing a broad philosophy or "world view."[1]

The role expectations in this study referred to the behavior or attitudes demonstrated by delinquent youth while participating in the program. Each of these referent behaviors or attitudes was first categorized according to the educational taxonomy described above. The categorization of the referent behavior or attitude determined the categorization of the corresponding role expectation.

As an example, a hierarchy of selected role expectations related to environmental learning is listed below according to the taxonomic categories:

1.0 Receiving

Item 12. Improve sensory awareness of the environment

2.0 Responding

Item 30. Limit own detrimental impact on the environment

3.0 Valuing

Item 34. Develop a sense of identity with the environment

4.0 Organization

Item 38. Begin to develop a sound environmental ethic

5.0 Characterization by a Value Complex

Item 18. Demonstrate ecological involvement and concern

The seemingly hierarchical nature of the taxonomy is demonstrated here. Item 12 under "Receiving" seems basic to the behavior described by the four "higher" expectations. The reader is referred to Figure 6, page 56, for the complete Taxonomy of Affective Role Expectations.

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[1]Krathwohl, et al., Taxonomy: Affective Domain, pp. 176-85.

It was hypothesized that responses to the checklist would provide evidence to support the categorization of the affective role expectations into a taxonomy that is both unidimensional and cumulative. If the taxonomy is unidimensional, it includes only those attributes which are related to a single universe of attributes which, in this case, is the universe of affective role expectations for delinquent youth in environmental stress-challenge programs. If the taxonomy is hierarchical, then responses to the individual categories should be cumulative. That is, all respondents who accepted the role expectations in only one category would accept those in the lowest category, "1.0 Receiving," and no others. Respondents accepting two categories of expectations would always accept "1.0 Receiving" and "2.0 Responding," and not categories 3.0, 4.0, or 5.0. The acceptance of a higher category would never be associated with rejecting a lower one.

This logical progression led to the formulation of the following hypothesis:

Statistical Hypothesis I

H_0: Responses to the affective role expectations as categorized by the taxonomy = simple functions of a single latent variable

H_1: Responses to the affective role expectations as categorized by the taxonomy $\neq$ simple functions of a single latent variable

The following paragraphs provide background information concerning the general theory and technique related to Guttman scalogram analysis. Those readers already familiar with this technical information may wish to turn ahead to page 101, where the actual scalogram analysis of the affective role expectations begins.

Guttman defines a simple function as follows:

> If $\underline{x}$ is a quantitative variable which takes on more than $\underline{m}$ values ($\underline{n} > \underline{m}$), and if we can divide the $\underline{x}$ values into $\underline{m}$ intervals which will have a one-to-one correspondence with the values of $\underline{y}$, then we shall say the attribute $\underline{y}$ is a "simple" function of $\underline{x}$.[1]

A quantitative variable which has the properties of "x" above, is called a "scale variable." Any quantitative variable that is an increasing or decreasing function of this scale variable can, of course, also be a scale variable. It is not important which is used for scaling purposes. The rank order is usually used as a scale variable.[2]

Figure 7 illustrates this relationship in terms of this study. The attribute "y" here represents the level of respondents' expectations as indicated by the distribution of responses to the affective role expectations categorized by the taxonomy. The quantitative variable "x" represents the rank order of one hundred respondents according to their total score. Figure 7 represents a perfect model in which $\underline{y}$ is a simple function of $\underline{x}$.

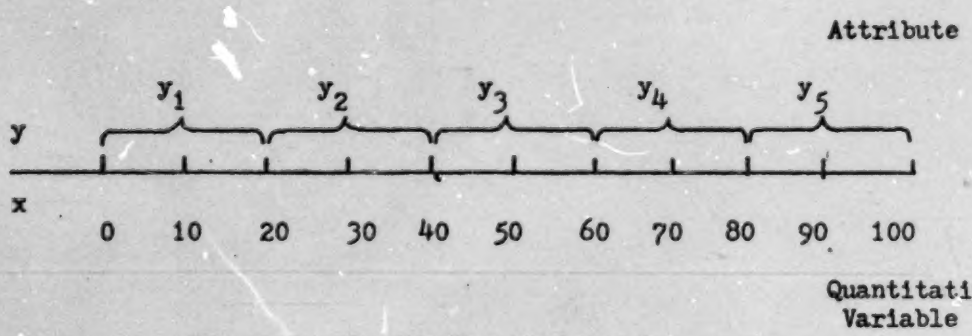

Figure 7. Simple Function Model

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[1] L. Guttman, "A Basis for Scaling Qualitative Data," p. 140.

[2] Ibid., pp. 140-41.

In Figure 7 the values of y denote the increasing level of affective role expectations as categorized by the five major taxonomic categories, so that:

y_1 = Receiving

y_2 = Receiving + Responding

y_3 = Receiving + Responding + Valuing

y_4 = Receiving + Responding + Valuing + Organization

y_5 = Receiving + Responding + Valuing + Organization + Characterization by a Value Complex

In this model, the rank of a particular respondent is an indicator of the level of his expectations. Thus, the level of expectations is a simple function of rank order by scores.

Furthermore, Guttman states that:

> "For a given population of objects, the multivariate frequency distribution of a universe of attributes will be called <u>scale</u> if it is possible to derive from the distribution a quantitative variable with which to characterize the objects such that each attribute is a simple function of that quantitative variable."[1]

According to this definition, the hypothetical data in Figure 7 would form a scale.

Applying this definition and extending the logic outlined above, responses to items which formed a perfect Guttman scale would be expected to take the pattern demonstrated in Table 13. In this table, a score of 1 denotes accepting a taxonomic category, while a score of 0 indicates rejecting a taxonomic category. Most of the five major taxonomic categories have been shortened to facilitate tabulation.

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[1] Ibid., p. 140.

TABLE 13

A MODEL OF A PERFECT GUTTMAN SCALE

Scale Type	Charvac	Organiz	Valuing	Respond	Receive
5	1	1	1	1	1
4	0	1	1	1	1
3	0	0	1	1	1
2	0	0	0	1	1
1	0	0	0	0	1
0	0	0	0	0	0

"Charvac" represents the highest classification or"Characterization by a Value Complex." These abbreviations will be used from this point on. As noted earlier, in this ideal pattern the acceptance of a more difficult or higher item would never be combined with the rejection of a less difficult or lower one.

However, data seldom correspond with such perfect or ideal models. Therefore, Nie and others have developed procedures to determine whether or not actual scales are efficient approximations to perfect scales. This method is described as follows:

> ...the test of scalability of the items in the Guttman procedure is the degree to which the data indeed fit the model. Each deviation from the expected pattern is counted as an error. The errors are then accumulated, and a number of standardized coefficients are produced from them to enable the researcher to determine if the items do indeed form a Guttman scale, i.e., a scale which is both unidimensional and cumulative.[1]

[1]Nie et al., Statistical Package for the Social Sciences, p. 531.

This general method is also recommended by Edwards[1] and Goodenough.[2] The remainder of this section discusses the actual scalogram analysis of the affective role expectation data.

Table 14 lists the division points for each of the five taxonomic categories. Each category contained between four and twelve role expectation items. Each item had a value range of zero to five. One to five points were assigned according to the Likert scale described in Chapter III. One indicated least agreement with an item and five indicated most agreement with an item or expectation. Zero was assigned to an item if a respondent left it blank. The actual response values for all items within a category were combined to form a single score or value for each respondent for each of the five categories. If a respondent scored 65 percent or more of the total possible points for a category, he was considered to have accepted that category. If he received less than 65 percent of the total possible points for that category, he was considered to have rejected it. Thus, if a respondent scored thirty-nine or more points for the combined items in either the "Receive" or "Respond" categories, he was considered to have accepted that category. Similarly, in order to indicate acceptance, a respondent must have received a score equal to or greater than twenty, thirteen and seventeen for categories three, four and five respectively. This cutting point of 65 percent was selected by the author as described previously in Chapter III.

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[1]Edwards, Techniques of Attitude Scale Construction, pp. 184-88.

[2]Goodenough, A Technique for Scale Analysis, pp. 179-89.

TABLE 14

DIVISION POINTS FOR TAXONOMIC CATEGORIES

Taxonomic Category	Number of Items	Possible Value Range	Division Point (percent)	Division Point (score)
1.0 Receive	12	0-60	65.0	39
2.0 Respond	12	0-60	65.0	39
3.0 Valuing	6	0-30	65.0	20
4.0 Organiz	4	0-20	65.0	13
5.0 Charvac	5	0-25	65.0	17

Table 15 summarizes the Guttman scalogram analysis of the data related to the five major categories of the Taxonomy of Affective Role Expectations. As described previously, the forty role expectation items were assigned a priori to the appropriate taxonomic category. An accept-reject division point was established for each category. The numbers appearing below each column headed by a score of 1 represent those respondents who accepted that category. The numbers appearing below each column headed by a score of 0 represent those respondents who rejected that category. The numbers in the stub represent the scale type or the total number of categories accepted by all respondents listed in each particular row. The term "ERR" appears above those items which are considered errors or which (based on their scale score) accepted a category when they should have rejected it or rejected a category when they should have accepted it.

TABLE 15

GUTTMAN SCALE FOR THE TAXONOMY OF AFFECTIVE ROLE EXPECTATIONS

Scale Type	Charvac 0	Charvac 1	Organiz 0	Organiz 1	Valuing 0	Valuing 1	Respond 0	Respond 1	Receive 0	Receive 1	Total
	ERR----		ERR----		ERR----		ERR----		ERR----		
5	0	23	0	23	0	23	0	23	0	23	23
	----ERR										
4	9	10	6	13	3	16	1	18	0	19	19
			----ERR								
3	12	1	10	3	4	9	0	13	0	1	13
					----ERR						
2	19	0	15	4	16	3	6	13	1	18	19
							----ERR				
1	14	0	14	0	14	0	11	3	3	11	14
									----ERR		
0	9	0	9	0	9	0	9	0	9	0	9
Sums	63	34	54	43	46	51	27	70	13	84	97
Pcts	65	35	56	44	47	53	28	72	13	87	
Errors	0	11	6	7	7	3	7	3	4	0	48

Coefficient of reproducibility = 0.9010

Minimum marginal reproducibility = 0.6639

Percent improvement = 0.2371

Coefficient of scalability = 0.7055

The sum and percent of the respondents accepting and rejecting each category appear at the bottom of the table. An accumulation of errors by category also appears across the bottom of the table. The left value under each category gives the number of respondents who rejected the category when they should have accepted it, and the right value indicates the number of respondents who accepted the category when they should have rejected it.

Of the ninety-seven respondents, twenty-three accepted the combined expectations in all five major taxonomic categories; nineteen accepted four of the categories; thirteen accepted three categories; nineteen accepted two categories; fourteen accepted only one category; and nine rejected all five categories. It must be remembered that this "acceptance" or "rejection" is based solely on the arbitrary 65 percent cutting point for the purpose of establishing a scale. It should not be interpreted literally. The reader is referred to Table 12 for the rank order of expectations based on the frequency distribution. "Errors" should also not be literally interpreted. These are "errors" only in relation to the "perfect" scale model.

Eighty-four respondents accepted the role expectations in the lowest taxonomic category, "Receiving." Four respondents who accepted at least one category, rejected "Receiving" and were thus counted as errors. Seventy respondents accepted the next highest category, "Responding." Three of these should have rejected this category, and were therefore counted as errors. Seven respondents who rejected this category should have accepted it and were errors. Fifty-one respondents accepted "Valuing." Three of these were errors. Seven

respondents who rejected this category should have accepted it and therefore were considered errors. Forty-three respondents accepted "Organization." Seven of these were errors. Six of the fifty-four who rejected this category were errors. Thirty-four respondents accepted "Characterization by a Value Complex." Eleven of these were errors. Ninety-seven directors and instructors produced a grand total of 3,880 responses which were combined under the five categories in the scale to produce a total of 485 dichotomus scale responses. Of these 485 scale responses, 48 were considered errors.

As evidenced by Table 15, the first four criteria to determine scalability as described in Chapter III were met by the data in the scale. That is, no category had more error in it than non-error; errors were random; there were no excesses of respondents at the extremes of the scale, and error was measured in terms of the number of responses departing from a predicted perfect reproducibility pattern.

The other four criteria to determine scalability concern the four statistics produced by the SPSS program. First, the coefficient of reproducibility, which is a measure of the extent to which a respondent's scale score is a predictor of his response pattern, was 0.9010 for this scale. Since a coefficient of reproducibility higher than .9 is considered to indicate a valid scale, this criterion was satisfied. A second measure, the minimum marginal reproducibility represents the minimum coefficient of reproducibility that could have occurred for the scale given the cutting points used and the proportion of respondents accepting and rejecting each of the categories. The minimum marginal reproducibility for this scale was 0.6639. A minimum reproducibility of between .2 and .8 is considered sufficient. More

importantly, the percent improvement, which is the difference between the coefficient of reproducibility and the minimum marginal reproducibility, was 0.2371. Since a percent improvement greater than .2 is considered sufficient, this criterion was also satisfied. Finally, the coefficient of scalability must be above .6 if the scale is truly unidimensional and cumulative. The coefficient of scalability for this scale was 0.7055. Since the data satisfied all criteria of scalability, the first null hypothesis was accepted and it was concluded that the responses of directors and instructors to the affective role expectations for delinquent youth as categorized by the Taxonomy formed a scale that was both unidimensional and cumulative.

It is important to this investigation to note that the definition of a Guttman scale, as described earlier, is identical to the operational definition of a true taxonomy as described by Bloom and others:

> Thus our classification may be said to be the form where behaviors of type A form one class, behaviors of type AB form one class, while behavior of type ABC form still another class. If this is the real order from simple to complex, it should be related to an order of difficulty such that problems requiring behavior A alone should be answered correctly more frequently than problems requiring AB.[1]

Since the responses to the affective role expectations for delinquent youth as categorized by the Taxonomy formed a scale which was unidimensional and cumulative, and since Bloom and others define a true taxonomy as also being unidimensional and cumulative, it seems logical to conclude that the Taxonomy of Affective Role Expectations is a true taxonomy. Thus, it can be inferred that within the confines

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[1]Bloom et al., Taxonomy of Educational Objectives Handbook 1: Cognitive Domain, p.18.

of this study, the affective role expectations meant essentially the the same thing to individual respondents and were meaningfully classified according to a true taxonomy.

Having established some basis for the validity of the measurement tool, it was decided to investigate the relationship between selected, independent, program and professional variables and the individual affective role expectations for delinquent youth which were indicated by directors and instructors. This investigation is discussed in the remainder of this chapter.

Procedure for Computation of the Data and Student's t for Hypothesis II through IV

The role expectation data derived in this study consisted of responses ranging in value from one through five on forty items. All responses were transferred from the respondents' checklists to punched computer cards as discussed previously. The SPSS subprogram "T-Test" for the comparison of independent sample means was utilized to compute the Student's t and probability level for testing whether or not the difference between two sample means was significant.[1]

For the computation of the Student's t statistics, the total number of respondents was divided into two general categories in accordance with their program or professional classification for the specific variable under investigation. This procedure was repeated for each hypothesis. For example, in testing Hypothesis II, respondents were divided into two groups according to the position they held in the program: director or instructor. The SPSS program

[1]Nie et al., Statistical Package for the Social Sciences, pp. 267-75.

reported the following information for each of the forty items:

1. The number of cases, the mean, standard deviation and standard error for each group of respondents

2. The F value and related probability level for the two sample variances

3. The t value, degrees of freedom and two-tailed probability based upon the pooled variance estimate

4. The t value, degrees of freedom and two-tailed probability based upon the separate variance estimate

In the case of one sample (one group) of size "n" the degrees of freedom was "n-1." Therefore, the sample variance was calculated as follows:

$$s^2 = \frac{\sum_{i=1}^{n} (x_i - \bar{x})^2}{n-1}$$

Thus, for each group of respondents and for each of the forty items, the means ($\bar{x}_1$ and $\bar{x}_2$), and variances (s_1^2 and s_2^2) were computed based on the number of cases in each group (n_1 and n_2). From the pair of sample variances the "pooled variance" was computed:

$$s^2 = \frac{(n_1 - 1)\, s_1^2 + (n_2 - 1)\, s_2^2}{(n_1 - 1) + (n_2 - 1)}$$

The sample variance for the difference of sample means was:

$$s_{\bar{d}}^2 = (s^2/n_2 + s^2/n_2)$$

t corresponding to the difference in sample means was:

$$t_{\bar{d}} \quad \frac{(x_1 - x_2)}{s_{\bar{d}}} \quad \text{with } (n_1 + n_2 - 2) \text{ degrees of freedom}$$

The above method can be used accurately to test for significant differences in means only if homogeneous variances or homoscedasticity can be assumed, or if $n_1 = n_2$.[1] Since this study was not designed so that groups were always equal, an F test of sample variances was performed to determine whether or not there was a significant difference between variances:

$$F = \frac{\text{larger } s^2}{\text{smaller } s^2}$$

If the probability for F was greater than .05, the variances were considered as equal and the t value based on the pooled-variance estimate as described above, was used. If the probability for F was less than or equal to .05, the variances were considered significantly different and the t value based on the separate variance estimate was used. In this case an approximation to t was computed:

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{s_1^2/n_1 + s_2^2/n_2}$$

Although this statistic is not distributed as Student's t, its probability was approximated by treating it as t, but with the following degrees of freedom:[2]

$$df = \frac{\left[(s_1^2/n_1) + (s_2^2/n_2)\right]^2}{\left[(s_1^2/n_1)^2/n_1 - 1)\right] + \left[(s_2^2/n_2)^2/n_2 - 1)\right]}$$

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[1]Gene V. Glass and Julian C. Stanley, Statistical Methods in Education and Psychology (Englewood Cliffs, N.J.: Prentice Hall, Inc.), pp. 295-97.

[2]Nie et al., Statistical Package for the Social Sciences, pp. 269-70.

This problem of testing the significance of the difference between two means when the population variances are unequal has been referred to as the Behrens-Fisher problem.[1]

The above statistical procedures were utilized in testing each of the remaining statistical hypotheses (II-IV). The results of these computations are reported in the following sections.

Role Consensus Between Directors and Instructors

It was hypothesized that consensus exists between program directors and instructors concerning their affective role expectations for delinquent youth who participate in their programs. This research hypothesis was refined further to produce the following statistical hypothesis:

Statistical Hypothesis II

H_0: The mean response of directors = the mean response of instructors for each item on the Checklist of Affective Role Expectations

H_1: The mean response of directors $\neq$ the mean response of instructors for each item on the Checklist of Affective Role Expectations

To test this hypothesis the t statistic and the related two-tailed probability was computed for each role expectation item. An Alpha level of .05 was determined a priori as an acceptable level of significance for the null hypothesis.

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[1]Ronald A. Fisher, Statistical Methods and Scientific Inference, Second edition, (New York: Hafner, 1959), pp. 93-97.

The mean scores and standard deviations for both directors and instructors, as well as the t value, degrees of freedom, and the two-tailed probability for each item, appear in Table 16. As evidenced by these data, none of the forty items indicated a significant difference in role consensus at the .05 level. Thus the null hypothesis was accepted for all forty items.

Although no items showed a significant difference, all forty items were included in Table 16 to facilitate comparing and contrasting the degree of consensus on specific items. Those affective role expectations upon which there was a high degree of consensus between directors and instructors as indicated by mean responses were:

1. Cope with fears and anxieties
2. Live primarily in the here and now
5. Attempt to resolve conflicts
14. Accept himself for both weaknesses & strengths
15. Experience environmental shock
16. See opposites of life as meaningfully related
21. Work or function efficiently
23. Trust other members of his group
25. Accept unavoidable discomfort
29. Participate in verbal self-evaluation
34. Develop a sense of identity with environment

Conversely, those role expectations upon which there was the least degree of consensus between directors and instructors as indicated by mean responses were:

TABLE 16

COMPARISON OF MEANS: AFFECTIVE ROLE EXPECTATIONS OF DIRECTORS AND INSTRUCTORS

Item	Directors[a] Mean	S.D.	Instructors[b] Mean	S.D.	T Value	df	2-Tail Prob
1. Cope with fears and anxieties	3.77	0.78	3.74	0.72	0.21	84	0.84
2. Live in the here and now	3.76	0.75	3.76	0.88	-0.05	85	0.96
3. Attempt untried experiences	3.96	0.91	4.11	0.80	-0.78	85	0.44
4. Sensitive to own needs & feelings	3.65	0.76	3.53	0.69	0.76	84	0.45
5. Attempt to resolve conflicts	3.28	0.80	3.30	0.74	-0.12	82	0.90
6. Decrease fear of environment	3.92	0.73	4.11	0.61	-1.27	85	0.21
7. Cooperate in group problems	3.84	0.83	3.66	0.85	0.99	85	0.33
8. Feel free to be himself	3.45	0.82	3.74	0.86	-1.59	85	0.12
9. Accept leadership responsibility	3.33	0.69	3.16	0.68	1.14	85	0.26
10. Accept responsibility for actions	3.31	0.83	3.13	0.91	0.96	84	0.34
11. Trust instructors	3.73	0.94	3.80	0.70	-0.33	84	0.74
12. Improve awareness of environment	3.90	0.75	3.95	0.70	-0.31	83	0.76
13. Increase persistence	3.63	0.82	3.71	0.80	-0.49	84	0.63
14. Accept weaknesses & strengths	3.29	0.80	3.26	0.80	0.16	84	0.87
15. Experience environmental shock	3.77	0.94	3.81	0.86	-0.16	78	0.87
16. See opposites as related	2.98	0.74	3.00	0.69	-0.14	76	0.89
17. Express sincere feelings	3.43	0.84	3.66	0.82	-1.28	85	0.21
18. Demonstrate ecological concern	3.02	0.95	2.97	0.85	0.24	85	0.81
19. Complete necessary chores	3.69	0.80	3.50	0.76	1.15	85	0.25
20. See man as essentially good	3.15	0.59	2.95	0.74	1.40	82	0.17

[a]Directors: N = 49 [b]Instructors: N = 38

TABLE 16---Continued

	Item	Directors[a] Mean	S.D.	Instructors[b] Mean	S.D.	T Value	df	2-Tail Prob
21.	Work or function efficiently	3.37	0.73	3.39	0.64	-0.18	85	0.86
22.	Demonstrate less hostility	3.71	0.54	3.57	0.69	1.11	84	0.27
23.	Trust members of group	3.57	0.76	3.61	0.89	-0.19	85	0.85
24.	Understand ecological concepts	2.98	0.72	3.13	0.74	-0.96	85	0.34
25.	Accept unavoidable discomfort	3.59	0.86	3.55	0.86	0.21	85	0.83
26.	Accept controlled aggression	3.40	0.77	3.22	0.85	1.02	83	0.31
27.	Show concern for others	3.57	0.79	3.39	0.72	1.08	85	0.29
28.	Increase intimate contact	3.56	0.68	3.49	0.90	0.44	83	0.66
29.	Participate in self-evaluation	3.43	0.68	3.39	0.89	0.20	85	0.84
30.	Limit impact on environment	3.27	0.70	3.34	0.75	-0.49	85	0.62
31.	Desire to serve others	2.86	0.76	3.00	0.77	-0.86	85	0.39
32.	More flexible in values	3.55	0.67	3.46	0.73	-0.72	81	0.47
33.	Show initiative	3.61	0.67	3.53	0.76	0.56	85	0.58
34.	Develop identity with environment	3.17	0.91	3.21	0.74	-0.24	84	0.81
35.	Develop esthetic attitude	3.10	0.92	3.03	0.72	0.42	85	0.68
36.	Become more uniquely himself	3.51	0.65	3.55	0.60	-0.31	85	0.76
37.	Develop awareness of limits	3.65	0.75	3.76	0.54	-0.79*	85*	0.43*
38.	Develop environmental ethic	3.16	0.80	2.97	0.68	1.17	85	0.25
39.	More positive attitude	3.73	0.64	3.79	0.62	-0.40	85	0.69
40.	Able to live outside institutions	3.71	0.77	3.81	0.70	-0.63	83	0.53

[a]Directors: N = 49 [b]Instructors: N = 38 *Based on separate variance estimate

6. Decrease his fear of the environment

8. Feel free to be himself

17. Express sincere feelings

20. See man as essentially good

Consensus, or lack of it, did not seem to be closely related to either the source of the item, the taxonomic level of the item, or the level of response to the item. For example, although there was a high degree of consensus concerning Item 16, neither directors nor instructors indicated that they held this expectation. Any evaluation of an item for practical use should consider all of these variables. Possible application of this information is discussed in Chapter VI.

Relationships Between Selected Professional Variables and Role Expectations

It was hypothesized that relationships exist between certain professional variables and the affective role expectations indicated by respondents. This research hypothesis was refined further to produce Statistical Hypotheses III and IIIa. These two hypotheses and the related role expectation data are presented in this section.

Statistical Hypothesis III

H_0: The mean response of respondents with no Outward Bound training = the mean response of those with Outward Bound training

H_1: The mean response of respondents with no Outward Bound training ≠ the mean response of those with Outward Bound training

The mean scores and standard deviations for those respondents with no Outward Bound training and for those with Outward Bound training, as well as the t value, degrees of freedom and the two-tailed probability for each item significant at the .05 level, appear in Table 17.

Of the forty role expectation items, five were found to be significant at the .05 level and twelve at the .01 level. Thus, the null hypothesis was rejected for seventeen of the forty items. No apparent pattern exists here in relation to the three educational models or the five taxonomic categories. However, it is interesting to note that for sixteen of these items the role expectations for delinquent youth held by directors and instructors with Outward Bound training were lower than those expectations held by respondents with no Outward Bound training. The one expectation held more strongly by respondents with Outward Bound training was Item 15, "Experience environmental shock."

Statistical Hypothesis IIIa

H_0: The mean response of instructors and directors with three years or more experience in present program = the mean response of those with less than three years experience in present program

H_1: The mean response of instructors and directors with three years or more experience in present program ≠ the mean response of those with less than three years experience in present program

No items were found to be significant at the .05 level for these two groups. Thus, the null hypothesis was accepted for all forty

TABLE 17

ITEMS SIGNIFICANTLY RELATED AT THE .05 LEVEL TO RESPONDENT'S OUTWARD BOUND TRAINING

	Items	No OB Training[a] Mean	S.D.	OB Training[b] Mean	S.D.	t Value	df	2-Tail Prob
1.	Cope with fears and anxieties	3.93	0.76	3.54	0.72	2.59	94	0.01
3.	Attempt untried experiences	4.23	0.77	3.79	0.84	2.63	95	0.01
5.	Attempt to resolve conflicts	3.47	0.88	3.14	0.60	2.07*	72*	0.04*
7.	Cooperate in group problems	3.95	0.86	3.53	0.78	2.56	95	0.01
10.	Accept responsibility for actions	3.43	0.93	3.06	0.78	2.15	94	0.03
11.	Trust instructors	4.09	0.71	3.44	0.90	3.88	94	0.03
15.	Experience environmental shock	3.60	0.84	4.04	0.90	-2.37	88	0.02
16.	See opposites as related	3.15	0.71	2.84	0.72	2.07	86	0.04
18.	Demonstrate ecological concern	3.30	0.93	2.75	0.78	3.11	95	0.00
19.	Complete necessary chores	3.89	0.75	3.40	0.72	3.28	95	0.00
21.	Work or function efficiently	3.66	0.65	3.15	0.63	3.90	90	0.00
24.	Understand ecological concepts	3.27	0.79	2.96	0.68	2.08	95	0.04
30.	Limit impact on environment	3.55	0.70	3.12	0.71	2.88	95	0.01
31.	Desire to serve others	3.18	0.79	2.70	0.72	3.15	95	0.00
34.	Develop identity with environment	3.53	0.88	2.91	0.71	3.86	94	0.00
35.	Develop esthetic attitude	3.34	0.89	2.83	0.67	3.22	95	0.00
38.	Develop environmental ethic	3.32	0.83	2.92	0.62	2.61*	78*	0.01*

[a]Respondents with no Outward Bound training: N = 44

[b]Respondents with Outward Bound training: N = 53

*Based on separate variance estimate

items. There appears to be no significant relationship between the length of experience a director or instructor has in their present program and the affective role expectations which they hold for participants who are delinquent youth.

Relationships Between Selected Program Variables and Role Expectations

It was hypothesized that relationships exist between certain program variables and the affective role expectations indicated by respondents. This research hypothesis was refined further to produce Statistical Hypotheses IV, IVa, IVb and IVc. These four hypotheses and the related role expectation data are presented in this section.

Statistical Hypothesis IV

H_0: The mean response of directors and instructors from programs with more than 50 percent delinquent youth = the mean response of those from programs with less than 50 percent delinquent youth

H_1: The mean response of directors and instructors from programs with more than 50 percent delinquent youth ≠ the mean response of those from programs with less than 50 percent delinquent youth

The mean scores and standard deviations for those respondents from programs with 51-100 percent delinquent populations and for those from programs with 1-50 percent delinquent populations as well as the t value, degrees of freedom and the two-tailed probability for each item significant at the .05 level, appear in Table 18.

items. There appears to be no significant relationship between the length of experience a director or instructor has in their present program and the affective role expectations which they hold for participants who are delinquent youth.

Relationships between Selected Program Variables and Role Expectations

It was hypothesized that relationships exist between certain program variables and the affective role expectations indicated by respondents. This research hypothesis was refined further to produce Statistical Hypotheses IV, IVa, IVb and IVc. These four hypotheses and the related role expectation data are presented in this section.

Statistical Hypothesis IV

H_0: The mean response of directors and instructors from programs with more than 50 percent delinquent youth = the mean response of those from programs with less than 50 percent delinquent youth

H_1: The mean response of directors and instructors from programs with more than 50 percent delinquent youth ≠ the mean response of those from programs with less than 50 percent delinquent youth

The mean scores and standard deviations for those respondents from programs with 51-100 percent delinquent populations and for those from programs with 1-50 percent delinquent populations as well as the t value, degrees of freedom and the two-tailed probability for each item significant at the .05 level, appear in Table 18.

TABLE 18

ITEMS SIGNIFICANTLY RELATED AT THE .05 LEVEL TO PERCENTAGE OF DELINQUENTS IN PROGRAM

	Item	51-100% Delinquent Population[a] Mean	S.D.	1-50% Delinquent Population[b] Mean	S.D.	t Value	df	2-Tail Prob
25.	Accept unavoidable discomfort	3.82	0.99	3.47	0.70	2.03	92	0.05
35.	Develop esthetic attitude	2.79	0.73	3.23	0.83	-2.57	92	0.01

[a]Respondents from programs with 51-100% delinquents: N = 34

[b]Respondents from programs with 1-50% delinquents: N = 60

Of the forty role expectation items, one was found to be significant at the .05 level and one at the .01 level. Thus, the null hypothesis was rejected for only two of the forty items. Directors and instructors who worked with a majority of delinquent youth scored significantly higher on Item 25, "Accept unavoidable discomfort," and lower on Item 35, "Develop a more spiritual or esthetic attitude."

Statistical Hypothesis IVa

H_0: The mean response of directors and instructors from programs <u>not</u> accepting participants sixteen or older = the mean response of those from programs accepting participants sixteen or older

H_1: The mean response of directors and instructors from programs <u>not</u> accepting participants sixteen or older $\neq$ the mean response of those from programs accepting participants sixteen or older

The mean scores and standard deviations for those respondents from programs which do not accept participants over fifteen years old and for those from programs which do accept participants sixteen or older, as well as the t value, degrees of freedom and the two-tailed probability for each item significant at the .05 level, appear in Table 19.

Of the forty role expectation items, five were found to be significant at the .05 level and five at the .01 level. Thus, the null hypothesis was rejected for ten of the forty items. Directors and instructors who worked with older youth scored significantly higher on all ten of these items.

Statistical Hypothesis IVb

H_0: The mean response of directors and instructors from programs having no courses over nine days in length = the mean response of those from programs having courses of ten days or more

H_1: The mean response of directors and instructors from programs having no courses over nine days in length $\neq$ the mean response of those from programs having courses of ten days or more

TABLE 19

ITEMS SIGNIFICANTLY RELATED AT THE .05 LEVEL TO AGE RANGE OF PARTICIPANTS ACCEPTED INTO PROGRAM

	Item	Not Accepting Participants Over 15[a] Mean	S.D.	Accepting Participants Over 15[b] Mean	S.D.	t Value	df	2-Tail Prob
8.	Feel free to be himself	3.23	0.82	3.65	0.88	-2.03	95	0.05
10.	Accept responsibility for actions	2.81	0.81	3.35	0.85	-2.59	94	0.01
12.	Improve awareness of environment	3.55	0.67	4.00	0.73	-2.62	93	0.01
13.	Increase persistence	3.23	0.75	3.73	0.79	-2.63	93	0.01
21.	Work or function efficiently	3.05	0.79	3.48	0.62	-2.71	95	0.01
23.	Trust members of group	3.14	0.71	3.65	0.85	-2.61	95	0.01
30.	Limit impact on environment	3.05	0.65	3.40	0.74	-2.04	95	0.04
31.	Desire to serve others	2.64	0.66	3.00	0.81	-1.93	95	0.05
32.	More flexible in values	3.10	0.72	3.45	0.67	-2.06	91	0.04

[a]Respondents from programs not accepting participants over 15: N = 22

[b]Respondents from programs accepting participants over 15: N = 75

The mean scores and standard deviations for those respondents from programs having no courses over nine days in length and for those from programs which have courses of ten days or more, as well as the t values, degrees of freedom and the two-tailed probability for each item significant at the .05 level, appear in Table 20.

Of the forty role expectation items, one was found to be significant at the .01 level. Thus, the null hypothesis was rejected for only one of the forty items. Directors and instructors who worked with longer courses scored higher on Item 14, "Accept himself for both weaknesses & strengths."

TABLE 20

ITEMS SIGNIFICANTLY RELATED AT THE .05 LEVEL TO LENGTH OF COURSES

	Item	No Courses Over 9 Days in Length[a] Mean	S.D.	Courses Over 9 Days in Length[b] Mean	S.D.	t Value	df	2-Tail Prob
14.	Accept weaknesses & strengths	2.88	0.85	3.36	0.72	-2.74	94	0.01

[a]Respondents from programs with no courses over 9 days: N = 24
[b]Respondents from programs with courses over 9 days: N = 73

Statistical Hypothesis IVc

H_0: The mean response of directors and instructors from programs having no long term follow-up component = the mean response of those from programs having a long term follow-up component

H_1: The mean response of directors and instructors from programs having no long term follow-up component ≠ the mean response of those from programs having a long term follow-up component

The mean score and standard deviation for those respondents from programs having no follow-up component and those from programs which do have a follow-up component, as well as the t value, degrees of freedom and the two-tailed probability for each item significant at the .05 level, appear in Table 21.

Of the forty role expectation items only one was found to be significant at the .05 level. Thus, the null hypothesis was rejected for one of the forty items. Directors and instructors who worked in programs having a long term follow-up scored significantly higher on Item 11, "Trust instructors."

TABLE 21

ITEMS SIGNIFICANTLY RELATED AT THE .05 LEVEL TO THE LONG TERM FOLLOW-UP PROGRAM COMPONENT

	Item	No Follow-Up Component[a] Mean	S.D.	Follow-Up Component[b] Mean	S.D.	t Value	df	2-Tail Prob
11.	Trust instructors	3.65	0.86	4.10	0.85	-2.06	93	0.04

[a]Respondents from programs with no follow-up: N = 76

[b]Respondents from programs with follow-up: N = 20

This chapter has presented the quantified data derived from the "Checklist of Affective Role Expectations for Delinquent Youth." These data included the Guttman Scalogram Analysis of the "Taxonomy of Affective Role Expectations for Delinquent Youth," the role expectations indicated by program directors and instructors, and the significant relationships between certain relevant professional and program data and responses to the Affective Role Expectations Checklist.

The following chapter includes a summary of the study, conclusions and implications derived from these findings, and recommendations for future program development, evaluation and research.

CHAPTER VI

SUMMARY, CONCLUSIONS AND IMPLICATIONS, AND RECOMMENDATIONS

Summary

A review of recent literature has indicated that there are presently more than 250 ongoing environmental stress-challenge programs in the United States. These programs, often called Outward Bound adaptive programs, are based upon the innovative educational model developed by Kurt Hahn in the 1940's which proposed to induce rapid intellectual and emotional growth through impelling students to perform beyond their preconceived physical and psychological limits. At least fifty-eight of these programs accept delinquent youth as participants. For the purpose of this study the term delinquent youth has been defined as adolescents who have demonstrated a tendency to engage in conduct that is out of accord with accepted social or psychological behavior and/or the law.

The search for alternatives to the criminal justice system, combined with the demand for accountability, have precipitated recent research related to environmental stress-challenge programs for delinquent youth. Research and evaluation designs have included a variety of data collection methods, including attitudinal testing, participant observation and follow-up monitoring. The results have

been overwhelmingly favorable. The indications are that delinquents who participate in such programs have demonstrated more positive attitudes toward peers and authority, improved self-concept, a drastically reduced recidivism rate, a reduced school drop-out rate, and a very successful post-treatment adjustment in terms of academic achievement and employability. However, many researchers and experts in the field have noted the need for more research concerning the processes involved in attaining such results. The purpose of this study was to contribute to the body of knowledge related to the theory and processes of environmental stress-challenge education and rehabilitation, to aid in the implementation of new programs, and to facilitate further evaluation and development of established programs.

A checklist was developed which contained items related to program data, personal and professional data of respondents, and the affective role expectations held by directors and instructors for delinquent youth. The selection of the forty affective role expectations was based upon an extensive search of related literature and a pilot survey. These items were classified a priori according to a taxonomy based upon the work of Bloom and others and adapted by the author.

A preliminary survey was administered to one hundred directors to determine which programs accepted delinquent youth. The final checklist was mailed to fifty-eight directors and ninety-two instructors. Forty-nine directors and forty-eight instructors from twenty-seven states completed and returned the checklist. With the aid of frequency counts and percentages, Guttman scalogram analysis, and

Student's t test analysis, data were analyzed in an attempt to determine trends and relationships.

Program data suggested that a typical program surveyed offers courses ranging in length from ten to thirty days and includes program orientation, counseling, initiative courses, outdoor skills training, emergency care training, environmental awareness, a wilderness expedition, solo, and community service. Most programs serve a population comprised mainly of white, urban males and females between the ages of thirteen and nineteen. The majority of programs accept only a small percentage of delinquent youth. However, there are some agency sponsored programs which accept only delinquent youth.

Personal and professional data indicate that a program director, typical of those surveyed, is a thirty-two year old male who has completed a master's degree with a major emphasis in education. He has received outdoor education and related skills training from a university or college, Outward Bound and the American Red Cross. He has four years experience in his present program and seven years experience in outdoor education. An instructor, typical of those surveyed, is a twenty-seven year old male who has completed a bachelor's degree with a major emphasis in education. He has received outdoor education and related skills training from Outward Bound and the American Red Cross. He has three years experience in outdoor education.

The responses of directors and instructors to the Checklist of Affective Role Expectations for Delinquent Youth were classified according to the five major categories of the Taxonomy of Affective Role Expectations. The resulting scale was analyzed according to the

Guttman and Goodenough techniques of scalogram analysis. Since the data satisfied all criteria of scalability, it was concluded that the responses of the affective role expectations as categorized by the Taxonomy formed a scale that was both unidimensional and cumulative. This provided evidence that, within the confines of this study, the affective role expectations meant essentially the same thing to individual respondents, and were meaningfully classified according to a true taxonomy. This analysis established some basis for the validity of the measurement tool.

The SPSS subprogram "T-Test" for the comparison of independent sample means was utilized to compute Student's t and probability levels for testing whether or not the difference between two sample means for responses to the Checklist of Affective Role Expectations was significant for the following variables: (1) respondents' position in the program; (2) Outward Bound training of respondents; (3) respondents' length of experience in present program; (4) percentage delinquent youth; (5) age of participants; (6) length of courses; and (7) follow-up component.

It was found that there was no significant difference between mean scores of directors and instructors on each of the forty checklist items. In other words, the respondents' present positions in the program did not significantly affect their responses to any of the role expectation items. In fact, mean responses indicated a high degree of consensus between the two sets of role definers, directors and instructors, on most of the role expectations.

Directors and instructors who had indicated that they had received training from Outward Bound scored significantly lower than

those with no Outward Bound training on sixteen of the forty role expectation items. Respondents with Outward Bound training scored significantly higher on only one item, "Experience environmental shock." In all, respondents with Outward Bound training scored lower on thirty-six of the forty items. There was no significant difference between the mean scores of respondents with more than three years experience in their present program and those with less than three years experience in their present program.

Directors and instructors who worked with a majority of delinquent youth scored significantly higher on Item 25, "Accept unavoidable discomfort," and significantly lower on Item 35, "Develop a more spiritual or esthetic attitude." Respondents who worked only with participants who were younger than sixteen years old scored significantly lower on the following ten role expectation items:

8. Feel free to be himself
10. Accept responsibility for own actions
12. Improve sensory awareness of environment
13. Increase capacity for persistence
21. Work or function efficiently
23. Trust other members of the group
30. Limit own detrimental impact on environment
31. Desire to serve others
32. Become more flexible in applying own values

Directors and instructors who worked only with courses less than ten days in length scored significantly lower on Item 14, "Accept himself for both weaknesses and strengths." Directors and instructors who worked in programs having a long term follow-up component

scored significantly higher on Item 11, "Trust instructors."

Conclusions and Implications

The most obvious conclusion to be drawn from the program data and related descriptive statistics is that Outward Bound continues to have a profound influence on the design of most environmental stress-challenge programs which accept delinquent youth. The length of courses offered and the types of program components included are for most programs, exclusively the same as those traditionally associated with Outward Bound. Furthermore, the majority of directors and instructors in such programs have received training from Outward Bound. In spite of the fact that much of the literature suggests adaptions to the Outward Bound model in order to better serve the special needs of delinquent youth, only a few of the programs surveyed seem to have made an attempt to do so. However, there were eleven programs surveyed which varied greatly from the mold of those which were "typical." These eleven programs served primarily a male, delinquent population with a high percentage from racial minority groups. They also included components not traditionally associated with Outward Bound, including "Recruitment and Screening," "Program Orientation" and "Long Term Follow-Up." The courses in these programs also tended to be of longer duration.

Demographic data of respondents indicate that these programs have a high turn-over rate among instructors and that although most instructors have college degrees, many received no outdoor education or related skills training while in college. These data support the conclusion that few, if any, of these programs have developed to the point where they can provide a professional career for their

instructors. On the other hand, the directors, in general, are older, have received more formal education directly related to their profession, and are more stable in their present position.

Based on the Guttman scalogram analyses, it was concluded that the Taxonomy of Affective Role Expectations is a valid representation of real phenomena. In other words, the affective role expectations meant essentially the same thing to individual respondents and were meaningfully classified according to a true taxonomy based on a hierarchy which does exist in objective reality. This implies that many of the expressed goals and objectives of individuals and programs in this field are not realistic. For example, although much of the program literature suggests that participation in an environmental stress-challenge program will foster a more spiritual or esthetic attitude, very few directors or instructors actually expect this to happen for the delinquent youth who participate in their programs. The implication here is that the instructional objectives of environmental stress-challenge programs for delinquent youth would be more realistically expressed if these objectives primarily concerned that behavior which was directly related to the more basic categories of the Taxonomy of Affective Role Expectations for Delinquent Youth.

Responses to the Checklist of Affective Role Expectations supports the conclusion that role consensus does exist between the two sets of role definers, directors and instructors, concerning the expected behavior and attitudes of delinquent youth who partici-

pate in their programs. This role consensus, when considered along with the hierarchy of expectations as categorized by the Taxonomy of Affective Role Expectations, provides some baseline data related to the development of an accurate definition of the role of delinquent youth in environmental stress-challenge programs. Neiman and Hughes, in a re-survey of the literature concerned with the problem of role concept, concluded that by the twentieth century psychologists began to emphasize the importance of the concept of self and the individual's attitude toward himself being determined by the expectations others held for him.[1] Since the improvement of self-concept is a major goal of all environmental stress-challenge programs, definition of role and role expectations is viewed as being essential to the understanding of the processes involved in such programs.

Based upon the data from the role expectations checklist and the Student's t test for the comparison of means between groups delineated on the basis of independent, professional variables, it was concluded that those instructors and directors with Outward Bound training generally indicate lower expectations for delinquent youth than those with no Outward Bound training. Generally Outward Bound schools in the United States accept only a small percentage of delinquent youth. Those delinquents who can attend an Outward Bound school are usually placed, alone or in pairs, in groups of more highly motivated participants. Thus, people with Outward Bound

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[1] L. J. Neiman, and J. W. Hughes, "The Problem of the Concept of Role--A Re-survey of the Literature," Social Forces, XXX (May, 1952), pp. 140-50.

experience may develop performance criteria that are based upon the more highly motivated and success-oriented Outward Bound norm. This weighted perspective could account for their lower expectations for delinquent youth.

Analyses of role expectation data based on the Student's t test for the comparison of means between groups delineated on the basis of independent, program variables, resulted in the following conclusions:

1. Respondents who worked with a majority of delinquent youth expected delinquents to "accept unavoidable discomfort" to a significantly greater extent than did respondents who worked with a minority of delinquent youth. However, respondents with a large percentage of delinquents expected them to "develop a more spiritual or esthetic attitude" to a significantly lesser extent. This seems to imply that respondents who worked with a majority of delinquent youth held more realistic perceptions of their capabilities in relation to these two role expectations.

2. Respondents who worked with older participants generally indicated higher expectations than those respondents who worked only with younger participants. The implication here is that the older and more mature participants demonstrated a higher level of affective behavior and attitudes, and thus warranted a higher level of affective role expectations from the role definers, directors and instructors.

3. Respondents who worked with longer courses expected a delinquent youth to "accept himself for both weaknesses and strengths" to a significantly greater extent than did respondents who worked only with shorter courses. This implies that the shorter courses (less

than ten days) do not provide as much opportunity for a participant to explore or demonstrate a realistic understanding of his limitations.

4. Directors and instructors who worked in programs having a long term follow-up expected delinquent youth to "trust instructors" to a significantly greater extent than did respondents who worked in programs having no follow-up. This implies that a longer association between staff and youth results in a higher degree of rapport and less cynicism on both sides.

Recommendations for Program Development

The purpose of this section is to make specific recommendations related to the further development and evaluation of environmental stress-challenge programs for delinquent youth. Based upon this study and its findings, it is recommended that programs attempt to:

1. Consider the possibilities of incorporating special services or components to meet the needs of participants who are delinquent youth. Two of the more important special components already in use by several of the programs surveyed, are program orientation and long term follow-up. Program orientation could include a vicarious multi-media, or actual experiential, pre-course introduction; individual interviews between the instructors and the youth; and the development of individual and specific performance contracts. These activities would serve to provide a realistic awareness of alternatives, increase commitment and understanding on the part of all parties, and reduce the environmental and cultural shock experienced by the youth. The long term follow-up could be provided directly by the program

staff, or on a contractual basis with social agencies which accept the youth after his egress from the stress-challenge phase of the program. This long term follow-up could involve termination of probation, training as a group leader or aide, employment, or placement in an alternative school and/or living situation. This component could provide the youth with opportunities to successfully transfer positive affective growth resulting from the program, to a more realistic social situation. The potential for innovation in this area has not been fully tapped. Furthermore, it is felt that the very survival of these programs is dependent upon such innovation and development.

2. Develop expressed program objectives which are more consistent with the expectations of directors and instructors working in the field. Such objectives would emphasize behavior and attitudes primarily related to the more basic taxonomic cagegories of "Receiving," "Responding," and "Valuing." These objectives should include specific behavior indicators such as "attempt untried experiences," as well as general goals such as "improve self-concept." The Taxonomy of Affective Role Expectations for Delinquent Youth could be well utilized in the development of these objectives. Such a set of objectives and behavior indicators would provide a valuable framework for the selection and training of staff, the development of an effective program design, and the evaluation of program processes and effects.

3. Develop methods of providing for more stability and professionalism among instructional staff. Staff stability and professionalism are very closely interrelated. In order for programs to

provide staff stability, a non-seasonal funding and referral system must be established. This generally involves a program becoming a "line item" or permanent resource for diversion from the juvenile justice system. The opportunities for such involvement are becoming greater as social awareness increases and the effectiveness of traditional systems of incarceration are re-evaluated. Opportunities for professional growth will improve with increased stability. This professional growth might center around the development of educational/social skills such as individual counseling and group dynamics as well as the traditional outdoor skills. One specific educational/social area where professional growth is urgently needed, involves the awareness and understanding within staff, especially those with Outward Bound training, of the special problems and needs of delinquent youth. These special problems include confusion, emotional immaturity, lack of motivation, acceptance of failure, inability to channel aggression constructively, inability to cope with stress, and underdeveloped social survival skills.

4. Develop the means for the ongoing, systematic and unobtrusive evaluation of program processes and results. This step is necessary for the further development of the state of the art and is essential to all of the previous recommendations. Related to this step is the need for more meaningful vehicles for inter-program and inter-agency communications. This might help to alleviate the problem of the re-invention of the stress-challenge program syndrome. The establishment of the annual experiential education

conference and the Outward Bound publications resource are moves in this direction. More academic involvement and the increased publication of research and related literature might also help.

Recommendations for Future Research

The results of this study revealed certain problems meriting further research. The most obvious areas for consideration include the following:

1. Comparing the processes and results of those programs designed specifically to serve delinquent populations with those programs which accept only a small percentage of delinquents. Research and opinion has varied greatly on this subject, and a definitive study is definitely needed. Such a study might also attempt to further refine the definition of "delinquent youth" with emphasis on selection criteria to determine who might benefit most from participation in such programs. This might also involve the comparison of the effects of an environmental stress-challenge experience on delinquent and non-delinquent youth.

2. Investigating the relationship between the affective role expectations of directors and instructors for delinquent youth and the actual behavior and attitudes demonstrated by delinquent youth while participating in their program. This study could lead to further validation and refinement of the Taxonomy of Affective Role Expectations for Delinquent Youth.

3. Comparing the effects of an environmental stress-challenge program with a more traditional diversionary project such as a work camp, training school or a group home. If each project was developed from similar expressed objectives, the effectiveness of the process

could be measured.

4. Measuring the perceptions of delinquent youth concerning their affective role expectations as participants in an environmental stress-challenge program. These perceptions could be compared with the affective role expectations of directors and instructors as developed in this study.

5. Defining the role of the instructor in environmental stress-challenge programs for delinquent youth. Role consensus could also be used in this study with the comparison of the perceived role expectations of the three sets of role definers: directors, instructors, and program participants who are delinquent youth. This study could provide data which would be useful in establishing guidelines for the selection and training of staff.

The above is by no means an all-inclusive list of possible studies. Future research might also include the development of an efficient evaluation model, a more refined determination of demographic variances of participants and staff, or a study of the effects of specific alterations or modifications of the program design. The scope of such programs is so broad and the field is so new that the opportunities for original research are many.

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APPENDIX A

PRE-SURVEY MATERIALS

Southern Illinois
University at Carbondale
Carbondale, Illinois 62901

Department of Forestry

January 23, 1976

Dear Sir:

Mr. Theodore F. Wichmann, Graduate Assistant in Environmental Studies and Outdoor Education at Southern Illinois University-Carbondale and Instructor at Minnesota Outward Bound School, is conducting a study under our supervision. We feel this project is unique and will make a real contribution to the field of experiential education for delinquent youth.

The primary purpose of this initial inquiry is to determine which programs accept "delinquent youth" as participants. Delinquent youth are defined broadly as adolescents who have demonstrated a tendency to engage in, or practice, conduct that is out of accord with accepted social or psychological behavior and/or the law. This includes such categories as emotionally disturbed, school drop-outs, drug abusers etc.

If you choose to participate in the study, "Affective Role Expectations for Delinquent Youth in Environmental Stress-Challenge Programs," it will take no more than 20 minutes of your time. It is not our intent to evaluate or identify specific programs, and all information will be treated professionally and confidentially. You may also find the results of the study to be interesting and useful.

Would you kindly check the enclosed postcard and return it by February 2 (Ground Hog Day).

Sincerely yours,

Paul Yambert
Professor of Forestry and Environmental Studies
Southern Illinois University-Carbondale

Derek Pritchard
Director
Minnesota Outward Bound School

SELF-ADDRESSED STAMPED POSTCARD

Dr. Paul Yambert
Environmental Studies
Forestry Department
Southern Illinois University
Carbondale, Ill. 62901

Official program name_____

Address_____City_____

State_____Zip_____Phone_____

Director (or contact person)_____

Do you accept "delinquent youth" into program? Circle one:
YES NO

Will you take 20 min. to mark a well constructed checklist of role expectations for delinquent youth? Circle one:
YES NO

Number of your instructors who might be willing to mark the checklist. Circle one: 0 1 2 3 or more

Would you like to receive a summary of this study? Circle one:
YES NO

APPENDIX B

SURVEY MATERIALS

Southern Illinois
University at Carbondale
Carbondale, Illinois 62901

Department of Forestry

February 13, 1976

We were pleased to receive your postcard with the affirmative response regarding participation in this project. Responses from similar programs nationwide have been heartening.

You will find included in this packet one checklist and envelope for your own response. Some directors indicated on the pre-survey postcards that there were program instructors willing to participate. Included in their packets will also be a checklist and envelope for each of these instructors. Please distribute them. The checklists are designed so that instructors may complete and return them individually without requiring more of your administrative time.

We will mail a summary of this study to you immediately following its completion. Your assistance in this project is deeply appreciated.

Sincerely yours,

Paul Yambert
Professor of Forestry and Environmental Studies
Southern Illinois University

Derek Pritchard
Director
Minnesota Outward Bound School

Southern Illinois
University at Carbondale
Carbondale, Illinois 62901

Department of Forestry

February 13, 1976

Dear Colleague,

Mr. Theodore F. Wichmann, Graduate Assistant in Environmental Studies and Outdoor Education at Southern Illinois University-Carbondale and Instructor at Minnesota Outward Bound School, is conducting a study under our supervision. We feel this project is unique and will make a real contribution to the field of experiential education for delinquent youth.

Delinquent youth are defined broadly as adolescents who have demonstrated a tendency to engage in, or practice, conduct that is out of accord with accepted social or psychological behavior and/or the law. This includes such categories as emotionally disturbed, school drop-outs, drug abusers etc.

The purpose of the project is to define certain educational principles operative in environmental stress-challenge programs for delinquent youth. We have developed an instrument to measure some of the role expectations for delinquent youth held by program directors and instructors. We believe you will find the items to be realistic and concise. Would you please take 20 minutes from your busy schedule to complete this checklist. A self-addressed, stamped envelope is included for your convenience.

It is not the intent of this project to identify any program or individual, and all information will be treated professionally and confidentially. You may also find the results of the study, which will be promptly mailed to your program, to be interesting and useful.

Would you kindly return this checklist by March 1. Your assistance in this project will be deeply appreciated.

Sincerely yours,

Paul Yambert
Professor of Forestry and Environmental Studies
Southern Illinois University

Derek Pritchard
Director
Minnesota Outward Bound School

Section I: Program Data

The purpose of these data is to obtain a brief description of your program and to identify nationwide trends in such programs. An estimate or average will suffice for most items. Please place a check before one or more appropriate responses. If further explanation is necessary, feel free to write in margins.

1. Length of Courses in Days: ___3 or less ___4-9 ___10-30 ___30 or more

2. Demographic Data of Participants:

   Age Range in Years: ___12 & under ___13-15 ___16-19 ___20-adult

   Percentage from Urban Environment: ___50% or less ___51-75% ___76-100%

   Percentage Racial Minorities: ___0-25% ___26-50% ___51-75% ___76-100%

   Percentage Female: ___0% ___1-25% ___26-50% ___51-75% ___76-100%

   Percentage "Delinquent Youth:" ___0% ___1-25% ___26-50% ___51-75% ___76-100%

3. Check Components Which Describe Part of Your Program:

___Immersion	___Base Camp Phase	___Emergency Care Training
___Solo	___Wilderness Expedition	___Outdoor Skills Training
___Marathon	___Community Service	___Recruitment & Screening
___Counseling	___Initiative Course	___Program Orientation
___Youth Leaders	___Urban Experience	___Environmental Awareness
___Others (specify):		___Long Term Follow Up

_____

Section II: Personal and Professional Data

The purpose of these data is to provide a profile of professionals working in programs such as yours. Please write in the blank or place a check before one or more appropriate responses. Feel free to elaborate.

1. Present Position: ___director ___instructor ___other (specify):_____

2. Sex: ___male ___female 3. Age: ___ ___

4. Highest Degree Held: ___high school ___bachelor's ___master's ___doctoral

5. Major Field of Study: _____

6. Length of Experience in Present Program: years___ months___

7. Length of Experience in Outdoor Education: years___ months___

8. Outdoor Education and Related Skills Training:

___NOLS	___University or College
___Outward Bound	___American Red Cross
___Others (specify):	

_____

Section III: Checklist of Affective Role Expectations For Delinquent Youth

Please indicate the extent to which you believe that delinquent youth will or will not demonstrate the following attitudes or behaviors while participating in your program. Circle the number of your response to the right of the item.

1 - Absolutely will not
2 - Probably will not
3 - May or may not
4 - Probably will
5 - Absolutely will

	Will not				Will
1. Cope with fears and anxieties	1	2	3	4	5
2. Live primarily in the here and now	1	2	3	4	5
3. Attempt untried experiences	1	2	3	4	5
4. Become sensitive to own needs and feelings	1	2	3	4	5
5. Attempt to resolve conflicts	1	2	3	4	5
6. Decrease his fear of the environment	1	2	3	4	5
7. Cooperate in solving group initiative problems	1	2	3	4	5
8. Feel free to be himself	1	2	3	4	5
9. Accept leadership responsibility	1	2	3	4	5
10. Accept responsibility for own actions	1	2	3	4	5
11. Trust instructors	1	2	3	4	5
12. Improve sensory awareness of environment	1	2	3	4	5
13. Increase capacity for persistence	1	2	3	4	5
14. Accept himself for both weaknesses & strengths	1	2	3	4	5
15. Experience environmental shock	1	2	3	4	5
16. See opposites of life as meaningfully related	1	2	3	4	5
17. Express sincere feelings	1	2	3	4	5
18. Demonstrate ecological involvement & concern	1	2	3	4	5
19. Complete necessary chores	1	2	3	4	5
20. See man as essentially good	1	2	3	4	5
21. Work or function efficiently	1	2	3	4	5
22. Demonstrate less hostility toward others	1	2	3	4	5

1 - Absolutely will not
2 - Probably will not
3 - May or may not
4 - Probably will
5 - Absolutely will

	Will not				Will
23. Trust other members of his group	1	2	3	4	5
24. Attempt to understand ecological concepts	1	2	3	4	5
25. Accept unavoidable discomfort	1	2	3	4	5
26. Accept controlled aggression in self & others	1	2	3	4	5
27. Show concern for others	1	2	3	4	5
28. Increase capacity for intimate contact	1	2	3	4	5
29. Participate in verbal self-evaluation	1	2	3	4	5
30. Limit own detrimental impact on environment	1	2	3	4	5
31. Desire to serve others	1	2	3	4	5
32. Become more flexible in applying own values	1	2	3	4	5
33. Show initiative in solving problems	1	2	3	4	5
34. Develop a sense of identity with environment	1	2	3	4	5
35. Develop a more spiritual or esthetic attitude	1	2	3	4	5
36. Become more uniquely himself	1	2	3	4	5
37. Develop a realistic awareness of own limits	1	2	3	4	5
38. Begin to develop a sound environmental ethic	1	2	3	4	5
39. Develop a more positive attitude	1	2	3	4	5
40. Become more able to live outside institutions	1	2	3	4	5

41. If you have additional affective role expectations for delinquent youth who participate in your program, please write them below. Other comments are also welcome.

APPENDIX C

A DIRECTORY OF ENVIRONMENTAL STRESS-CHALLENGE PROGRAMS ACCEPTING DELINQUENT YOUTH

BACSTOP	176 Limit Street Battle Creek, MI 49017 Director: Lee Snooks	Phone: (616) 962-5581 X 306
BARNUM RECREATION CTR	360 Hooker Denver, CO 80219 Director: Gene Moore	Phone: 297-5948
BRECKENRIDGE SKI MOUNTAINEERING SCHOOL	Box 1058 Breckenridge, CO 80424 Director: Gene Dayton	Phone: 453-2368
DARROW HALL OPERATION BREAKOUT	Box 550 Cedar Hill, MO 63016 Director: Bro. Pius Kamphefner	Phone: 296-5199
DISCOVERY, INC.	316A Victory Drive Herndon, VA 22070 Director: Ralph Puckett	Phone: (703) 471-1014
ENCOUNTER FOUR	Butler County Community College Butler, PA 16046 Director: Benjy Simpson	Phone: (412) 287-8711 X 138
THE EVERGREEN STATE COLLEGE	Outdoor Education Olympia, WA 98505 Director: Willi Unsoeld	Phone: (206) 866-6648
GREAT HOLLOW WILDERNESS SCHOOL OF WESLEYAN UNIV	Wesleyan Station Middletown, CT 06457 Director: Peter Budryk	Phone: (203) 347-9411 X 515
HIGHLAND SURVIVAL SCHOOL	P.O. Box 4754 Colorado Springs, CO 80930 Director: Richard L. Jamison	Phone: 599-3283
HOLISTIC EDUCATION	P.O. Box 591 Forest Knolls, CA 94933 Director: Tom Pinkson	Phone: 488-0545
HOMEWARD BOUND	Box F Brewster, Mass. 02631 Director: Michael Sutton	Phone: (617) 896-3060
IMPACT 4H	666 Clinton Ave Newark, NJ 07108 Director: Bill Wallace	Phone: (201) 375-0470

THE INFINITE ODYSSEY	14 Union Park St Boston, MA 02118 Director: Jenny Russell	Phone: (617) 542-0060
JUNCTION OUTDOOR PROJECT	65 Daniel Street Portsmouth, ME 03801 Director: Ellen Leonard	Phone: (603) 436-9222
MINI-SCHOOL	18301 Hwy 7 Minetonka, MN 55343 Director: Linda Douglas	Phone: 474-5965 X 59
NATIONAL OUTDOOR LEADERSHIP SCHOOL	Box AA Lander, WY 82520 Director: Peter Simer	Phone: 332-4381
NEBRASKA OUTDOOR ENCOUNTER	Box 805 Chadron, NE 69337 Director: Gary Gablehouse	Phone: (308) 432-3812
OPERATION TOGETHER	5400 Arsenal St. Louis, MO 63139 Director: Dan Mueller or Pam Burns	Phone: 644-5400
OPERATION UPSTREAM	501 Tenth St. NE Atlanta, GA 30309 Director: Robert C. Kelley	Phone: (404) 875-8944
OSAGE EXPEDITIONS	Box 538 Jefferson City, MO 65101 Director: Steve Carew	Phone: (314) 751-3939
OUTDOOR EDUCATION CONSULTANTS	1826 So. Plymouth Rd. Minnetonka, MN 55343 Director: Tory Stempf	Phone: (612) 920-0119
OUTDOOR EXPERIENCES, INC.	P.O. Box 1055 Mankato, MN 56001 Director: Alan Hale	Phone: 387-5418
OUTDOOR SURVIVAL YOUTH LEADERSHIP	Brigham Young Univ Provo, UT 84601 Director: Doug Nels	Phone: 374-1211 X 2593
OUTREACH	616 High Street Bath, ME 04530 Director: Richard W. Klain	Phone: (207) 443-5584
COLORADO OUTWARD BOUND SCHOOL	945 Pennsylvannia Denver, CO Director: Gerald L. Golins	Phone: (303) 837-0880

DARTMOUTH OUTWARD BOUND SCHOOL	Box 50 Hanover, NH 03755 Director: Peter Bryant	Phone: (603) 646-3359
HURRICANE ISLAND OUTWARD BOUND SCHOOL	Box 429 Rockland, ME 04841 Director: Peter Willauer	Phone: (207) 594-5548
MINNESOTA OUTWARD BOUND SCHOOL	1055 E. Wayzata Wayzata, MN 55391 Director: Derek Pritchard	Phone: (612) 473-5476
NORTH CAROLINA OUTWARD BOUND SCHOOL	P.O. Box 817 Morganton, NC 28655 Director: Dan Meyer	Phone: 437-6112
NORTHWEST OUTWARD BOUND SCHOOL	3200 Judkins Road Eugene, OR 97403 Director: Ian Wade	Phone: (503) 342-8044
SOUTHWEST OUTWARD BOUND SCHOOL	P.P. Box 2840 Santa Fe, NM 87501 Director: Lee Maynard	Phone: (505) 988-5573
PARKWAY YOUTH CENTER, INC. OUTDOOR CHALLENGE/ ADVENTURE	2842 N. Ballas St. Louis, MO 63131 Director: Don Obert	Phone: (314) 569-1277
PARTNERS, INC.	1260 W. Bayaud Denver, CO 80209 Director: Jeff Pryor	Phone: 777-7000
PROJECT CHALLENGE	Green Mountain High School Chester, VT 05143 Director: Dave Hopkinson	Phone: (802) 875-2146
PROJECT I.N.S.I.T.E.	McLean Hospital P.O. Box 8 Belmont, MA 02178 Director: Karen McCann	Phone: 855-2575
PROJECT TRUST	3900 S. Carr Denver, Co 80235 Director: Peter Martin or Howard Hoffman	Phone: 986-2277 X 203
PROJECT U.S.E.	228 Alexander Rd. Princeton, NJ 08540 Director: Phillip M. Costello	Phone: (609) 921-2021

PROJECT WHITE-WATER	25 St. Clair Ave E Room 312 Toronto, Ontario CANADA Director: Philip Fischer	Phone: 961-9353
PROJECT WILDERNESS	1549 El Prado San Diego, CA 92101 Director: Lawrence J. Andrews	Phone: 233-7144
REACHING OUTWARD ADVENTURE IN SELF-DISCOVERY	Penncrest School Dist Saegertown, PA 16433 Director: Susanne Lang-Smith	Phone: (814) 724-1277
RESURGENCE	RD 1 Fair Haven, VT 05743 Director: Ed Blechner	Phone: none
ROCK CREEK FOUNDATION, INC.	Courthouse Anaconda, MT 59711 Director: Michael Papich	Phone: 563-3881
SOUTHEASTERN IDAHO DRUG EDUCATION PROGRAM	P.O. Box 4166 Pocatello, ID Director: Tina Eaton	Phone: (208) 233-6170 X 316
STONE VALLEY OUTDOOR SCHOOL	R R #1 Petersburg, PA 16669 Director: Charles Gregory	Phone: none
S.T.R.E.A.M.	520 Lake St. Louis, MO 63119 Director: Hank Schafermeyer	Phone: (314) 962-7391
SURVIVAL PROJECT	Lewis & Clark Community College Godfrey, IL 62035 Director: Jim Radford	Phone: 466-3411
THISTLEDEW CAMP	Box W-10 Togo, MN 55788 Director: Dennis Hanson	Phone: (218) 376-3811
UNDERWAY	Southern Illinois University Carbondale, IL 62901 Director: Tom Yahraes	Phone: 453-2244
VENCERMOS	Hudson High School Hudson, MA Director: Jim Smith	Phone: none

WILD COUNTRY SCHOOL	Box 817 Park City, UT 84060 Director: John O. Lambert	Phone: 649-9240
WILDERNESS ENCOUNTER	P.O. Drawer 10K Milwaukee, WI 53201 Director: Larry L. Lenox	Phone: (414) 475-8192
WILDERNESS EXPERIENCE	A.S.U. Boone, NC 28608 Director: Dr. Keener Smathers	Phone: (704) 262-4614
WILDERNESS SCHOOL	Box 346 East Hartland, CT 06027 Director: John Flood	Phone: (203) 653-2422
WILDERNESS YOUTH PROGRAMS	109 RB Brigham Young Univ Provo, UT 84601 Director: Doug Cloward	Phone: 374-1211 X 2593
YOUTH ADVENTURES, INC. OUTDOOR SCHOOL	P.O. Box 770 Oregon City, OR 97045 Director: Ken Dalton	Phone: 656-7081
YOUTHBOUND	350 Waukegan Rd. Deerfield, IL 60015 Director: Tom Creighton	Phone: (312) 948-0835
YOUTH COMMUNITY RESIDENTIAL TREATMENT CTR	106 Nicholson Hall University of Minnesota Minneapolis, MN 55455 Director: Robert D. Benjamin	Phone: (612) 373-4107

VITA

Graduate School
Southern Illinois University

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Colleges or Universities attended	Years attended	Degree earned	Major Field
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Thesis Title:

AFFECTIVE ROLE EXPECTATIONS FOR DELINQUENT YOUTH IN ENVIRONMENTAL STRESS-CHALLENGE PROGRAMS

(Advisor: Dr. Paul Yambert)

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